

**Teacher Retention and Hiring in High Need Schools:
A Literature Review Prepared for Pinellas County Schools**

December 9, 2015

Prepared by Oriana Eversole
Senior Coordinator of Evaluation, Title I
in partnership with Assessment, Accountability and Research

Introduction

The challenge of recruiting and retaining talented teachers for high needs schools is one that has been explored by numerous researchers. The challenge, however, is finding practices and strategies that have actually been proven to be effective. This literature review examines the best practices that have been identified and makes specific recommendations that Pinellas County Schools can consider to approach this challenge in strategic ways.

Teacher Recruitment and Retention Research and Strategies

According to The New Teacher Project, "The first step is choosing the right team. Recruitment and hiring can bring in strong teachers and set expectations for school culture" (2012, slide 2). Tools recommended by TNTP include job descriptions and systems for analyzing recruitment data to improve practice. One example of a system for hiring teachers at high need schools is Chicago Public Schools. Within their school district, the The Office of School Improvement (OSI) implements hiring for turnaround schools. They conduct hiring sessions in the spring and set goals for hiring and target dates (The New Teacher Project, 2012).



© TNTP 2012

Linda Darling-Hammond identifies four primary factors that have a strong influence on teacher recruitment and retention. These include salaries, working conditions, preparation, and mentoring and support. She states, "Among teachers who leave their jobs due to dissatisfaction, salaries and working conditions such as poor administrative support run neck and neck as reasons for leaving" (p. 20). Teacher bonuses alone are limited in their ability to attract high performing teachers to high-needs schools. The primary conclusions that Darling-Hammond provides are as follows:

- Investments in competitive salaries are important. However, recruiting and keeping good teachers—both novice and experienced teachers—is equally a matter of attending to key working conditions that matter to them. In addition to those often considered, like class sizes, teaching loads, and the availability of materials, these include teacher participation in decision-making, strong and supportive instructional leadership from principals, and collegial learning opportunities.
- Seeking out and hiring better prepared teachers has many payoffs and savings in the long-run, both in terms of lower attrition and higher levels of competence, which reduce later costs for dealing with unnecessary student failure as well as unnecessary teacher failure. Investments that enable candidates to become well-prepared through service scholarships and programs like urban teacher residencies can provide pipelines of well- prepared teachers who both enter and stay in high-need schools.
- When the high costs of attrition are calculated, many of the strategic investments needed to support competent teachers in staying, such as mentoring for beginners and ongoing learning and leadership challenges for veterans, actually pay for themselves in large degree. A stable teaching force that becomes increasingly effective reduces the high costs of attrition while also reducing the costs of student failure. pp. 26-27

Audrey Amrein-Beardsley (2007) conducted a study on recruiting expert teachers to hard-to-staff schools. The most highly qualified teachers in the state of Arizona were interviewed to ask them about their job-related preferences, what it would take for them to consider teaching in the state’s hard-to-staff schools, and how to retain them. As part of the survey, teachers were asked to suggest policies that may support increased student achievement in high needs schools. These answers were categorized and synthesized. The top three policy suggestion include policies around effective leadership, financial incentives, and increased opportunities for mentorship and collaboration. A synthesis of these themes and recommendations are provided below.

1. Place expert principals in high-needs schools. These teachers know that placing an expert teacher into a high-needs classroom will improve student learning, and they believe the same will occur if an expert principal is the school’s leader.
2. Salaries, incentives, and signing bonuses should be offered to expert teachers to entice them to teach in high- needs schools. Incentives should be equitably distributed based on teachers’ awards, degrees, experience, and other qualifications related to teacher expertise, and the incentives should reflect the levels of student need found in the schools. In addition, district and state policies that would permit, not prevent, interdistrict transfers must be devised so that expert teachers are encouraged to transfer to another district to teach in a high-needs school.

3. Encourage and allow time for the best teachers in high-needs schools to mentor and collaborate with other teachers. Expert teachers want to work with less-qualified and less-experienced teachers to help them become better at what they do, but they are frustrated by limited opportunities to do so. (Amrein-Beardsley, 2007, pp. 66-67).

Additional and somewhat overlapping recommendations are provided in a research brief developed by The Council of Great City Schools (Snipes & Horwitz, 2007), including a detailed overview of the role of mentoring and induction programs. Further emphasis on the need for mentoring and a comprehensive system for growing new teachers is echoed in a meta-analysis conducted by Borman and Dowling (2008). They state:

Beyond personal and family factors that can affect new teachers' career decisions, another reason new teachers leave is that teaching, as a profession, has been slow to develop a systematic way to induct beginners gradually into a highly complex job...However, this meta-analysis suggests that when more formal organizational mechanisms are put in place to provide novice teachers with support networks and mentoring opportunities, these efforts are associated with decreased attrition rates. (p. 397)

Recommendations for Retaining and Recruiting Effective Teachers in Urban Schools:

- Any effective strategy designed to address staffing challenges and improve teacher quality in low-income, high-minority urban districts will have to take both salary levels and working conditions into account.
- Urban school systems should increase the intensity, breadth, and quality of mentoring and induction programs for teachers in high need schools.
- Key stakeholders in public education should support rigorous evaluation research of teacher retention strategies and programs.
- Policy makers and district leaders should develop a working definition of high-quality teachers that better captures the contribution of teachers to student learning, and link teacher recruitment, hiring and incentive programs and policies to student achievement.
- Reform human resources tracking systems and teacher assignment policies. (Snipes & Horwitz, 2007, pp. 7-8)

Key Components of Effective Mentoring and Induction Programs Include:

- Paid teacher mentors with experience in the same subjects as the teachers that they are supporting;
- Full-time release of mentors from their teaching assignments;
- Two years of mentoring (for beginning teachers);
- Sufficient time, from one and a half to two and a half hours per week, allocated to each teacher that a mentor supports;
- Use of formative assessment data;

- Beginning teacher seminars that focus on lesson development and alignment with uniform, research- based teaching standards;
- Instructional mentoring that focuses on uniform, research-based teaching standards;
- Common planning time for teachers;
- Regularly scheduled collaboration with teachers on issues of instruction;
- Participation in an external network of teachers; and
- Regular, supportive communication with principals and other administrators. (Snipes & Horwitz, 2007, p. 7)

Boyd, et al. (2005) examined the factors that influence high performing teachers' decisions to stay or transfer to another school or district. They specifically looked at teachers in New York State during the first five years of their teaching careers. They noted that teachers did respond positively to salary incentives and non-financial incentives such as class size, preparation time, student characteristics, and school leadership. Teachers are more likely to quit or leave when teaching lower achieving students. The authors note that there is a difference in teacher mentalities when it comes to teaching lower performing students, with some who are unaffected while others are strongly affected. Another factor influencing high performing teachers is the distance of their commute.

It is interesting to note that the teaching profession actually has lower turnover rates when compared to most other professions (Ableidinger & Kowal, 2010). Therefore, the primary challenge that schools and districts face is to recruit and retain those teachers who are the high performers. They provide four key strategies which include competitive pay and timely raises; opportunities for advancement; flexible and challenging work roles; and building lasting teams by grouping high performers together.

In addition, when recruiting highly effective teachers, there is evidence to suggest that grouping these teachers together to maximize their impact on students and developing a cohort that can work collaboratively can be beneficial (Reform Support Network, 2014). One example of this is the T3 initiative sponsored by the nonprofit organization Teach Plus. They place highly effective teacher leaders in turnaround schools in Massachusetts, Washington State, the District of Columbia, and Tennessee. Results for the Boston T3 initiative and others have shown increases in student learning in English language arts and mathematics.

A Promising Case Study Example

T3 teacher leaders are placed in teams that comprise at least 25 percent of the school's total faculty and play a central role in helping to turn around low-performing schools, as they are selected based on their effectiveness with urban students, are trained in a cohort for the challenges of a turnaround, have formal responsibility for instructional leadership and have the opportunity to earn additional pay. (p. 3)

➡ A Promising Case Study Example

One innovative example of a multi-tiered approach to teacher recruitment and retention is Project L.I.F.T. in North Carolina's Charlotte-Mecklenburg Schools. This is a public-private partnership that also recruits Teach For America teachers to the target schools. Launched in 2012, the program aims to extend the reach of excellent teachers to more students, while increasing pay and implementing complex career paths for these teachers within current budgets and without the need for supplemental funding. The schools' staffing plans are intended to enable excellent teachers to lead multiple classrooms, specialize in their best subjects and roles, use digital learning to free their time to reach more students, plan and collaborate, and employ interactive technology to teach students in multiple schools. (Reform Support Network, 2014, p. 3).

<http://www.projectliftcharlotte.org/>

➡ A Promising Case Study Example

Teacher Leaders Roles in New York City Schools

(from [Http://schools.nyc.gov/Teachers/TeacherDevelopment/TeacherLeaderRoles.htm](http://schools.nyc.gov/Teachers/TeacherDevelopment/TeacherLeaderRoles.htm))

- **Model Teacher, Peer Collaborative Teacher, and Master Teacher**
The Model Teacher and Master Teacher roles were created as part of the 2014 teachers' contract to provide additional opportunities for teachers to improve the quality of instruction for our City's children, assume leadership roles to grow professionally, and share their instructional practices with peers, while remaining in the classroom. During the spring of 2015, the NYCDOE and UFT agreed to amend the teachers' contract to further expand the teacher career pathway through the creation of the Peer Collaborative Teacher role.
- **Model Teachers** use their classrooms to serve as a laboratory and resource to support the professional growth of colleagues. Working closely with other teacher leaders, the Model Teacher is a resource to other teachers by demonstrating effective teaching strategies (*\$7,500 additional compensation; full teaching program*)
- **Peer Collaborative Teachers** support their colleagues through coaching and interventions to improve instructional and student learning aligned to the Danielson *Framework for Teaching* (*\$12,500 additional compensation; a minimum of one period of release time for teacher leader responsibilities; please note that teachers who qualify for the Peer Collaborative Teacher role also qualify for the Model Teacher role*)
- **Master Teachers** work closely with school and/or district leadership to promote excellent teaching through purposeful sharing of best practices, peer coaching, and creating a collaborative learning culture that bolsters instruction at a school- or district-wide level. (*\$20,000 additional compensation; a minimum of one period of release time for teacher leader responsibilities; please note that teachers who qualify for the Master Teacher role also qualify for the Model Teacher and Peer Collaborative Teacher roles*)

Learning Partners Program (LPP) Teacher Leaders

Teachers at schools participating in the [Learning Partners Program \(LPP\)](#) may also have the opportunity to take on a teacher leader role through the LPP Model Teacher and LPP Master Teacher roles (*Teachers at LPP schools who are interested in learning more about the application process should connect directly with their principal*).

- **LPP Model Teachers** demonstrate success in achieving instructional gains with students and have an interest in sharing their classroom practice with others as "lead learners" in an effort to support the professional growth of their peers. The LPP Model Teacher is a school-based teacher leadership role in which the teacher uses his/her classroom as a laboratory classroom and resource to support the articulated goals of the school and work of LPP.
- **LPP Master Teachers** are school-based instructional leaders with expertise in leading collaborative school teams, as well as demonstrated success improving student outcomes. LPP Master Teachers foster a collaborative learning culture by spreading strong practices that promote student achievement across their schools and their partner schools. *LPP Master Teacher positions are available in Learning Partners Plus Host schools for the 2015-16 school year.*

Teacher Incentive Fund (TIF) Teacher Leaders

In September 2012, the NYCDOE, in collaboration with the United Federation of Teachers (UFT), was awarded a five-year federal Teacher Incentive Fund (TIF) grant to implement and refine a teacher career pathway in 78 high-need middle schools.

During the current 2014-15 school year, the NYCDOE is in the second year of piloting a new model of distributive leadership, which includes two teacher leadership roles: **Peer Instructional Coach** and **Model Teacher (formerly called Demonstration Teacher)**.

In addition to their teaching duties, Peer Instructional Coaches and Model Teachers work in collaboration with their school leaders to support colleagues to improve instruction and student learning:

- **Peer Instructional Coaches** support their colleagues through coaching and intervisitations to improve instruction and student learning aligned to the Danielson Framework for Teaching.
- **Model Teachers** use their classrooms as a laboratory classroom to serve as a resource for colleagues' professional growth.

A Closer Look at Financial Incentives for Teacher Recruitment and Retention

While multiple studies have not been able to link teacher pay to increased student outcomes, a comprehensive study conducted by Loeb and Page (2000) suggests that those studies failed to account for non-financial job attributes and alternative wage opportunities. The researchers found that when using a regression model to control for labor market forces and accounting for non-pay attributes of teaching, a 10% increase in teacher wages reduces student dropout rates by 3% to 4%:

Our estimates suggest that, holding all else equal, raising teachers' wages by 10% (which would undo the 10% fall in relative wages that occurred during the 1980s) would reduce dropout rates by between 3% and 6%. Likewise, if the 20% increase in real teacher wages that occurred between 1959 and 1989 had been a relative increase (that is, the alternative opportunities for female college graduates had remained constant), then dropout rates would be at least 8.4% lower than they are today...Moreover, targeted increases may be more effective than across-the-board increases. (p. 406)

This study has important implications for educational policy and decisions regarding teacher pay. There is a connection between teacher pay and student outcomes, especially when using a targeted approach. Based on this information, although there may be other ways to appeal to teachers and to recruit them to positions, the district should consider what they have control over to make the difference. Pay may be one of the few incentives that the district can definitively put into place as an intervention for future student success. It is important to note, however, that careful selection of high performing and experienced teachers is an important consideration when implementing a teacher recruitment and retention policy. For example, Hanushek, et al. (1999) found that there is a significant relationship between salaries and student achievement outcomes for experienced teachers only as opposed to new hires or probationary teachers.

The Reform Support Network's report, *Recruiting and Retaining Highly Effective Turnaround Teachers* (2014), reports on strategies to recruit and retain highly effective teachers within turnaround schools. While the state can potentially provide support for teacher recruitment initiatives, there are many models of districts who have developed their own model for recruitment of teachers for low performing schools. They suggest that salary and other financial incentives, while not the only factors in recruitment and retention, are a necessary motivator to bring teachers into high needs schools and to keep them there. They highlight a study that look at how transfer incentives attract highly effective teachers to low-performing schools:

A recent study funded by the U.S. Department of Education found that financial incentives successfully attracted high performing teachers to transfer to low-performing schools and retained them in these schools for two years. A majority of teachers chose to remain in their schools even after two years, when the financial incentive payments ended. In elementary schools, these high performers helped to raise math and reading test scores and were found to be more effective than teachers who would have filled the schools' teaching vacancies without the presence of the transfer incentive program. To review the technical report, see <http://ies.ed.gov/ncee/> (p. 2)

Petty and O'Conner's study on attracting and keeping teachers in high-need schools examined the perceptions of teachers in high-needs high schools (HNHS) regarding teacher retention and recruitment. They found that money was chosen the most as a factor that would attract them to high need schools. The authors concluded that, "Money was most frequently chosen at each ranking level (37% overall). Yet, administrative support (12.7% overall) and class resources (9.6% overall) were viewed by the sampled teachers as secondary factors to consider when attracting teachers to HNHS" (2012, p. 76).

Some studies suggest that teacher incentives would need to match or exceed the financial premiums that other sectors use, which would be a 10-25 percent increase in average base pay as opposed to the current average financial incentives of 4-9 percent that most districts are providing (Banker, et al., 1996). Hanushek, Kain, and Rivkin (2004) have recommended that a 25-40 percent increase in pay may be warranted to entice high performing teachers to high need schools. Furthermore, an analysis of financial incentives for hard-to-staff positions across sectors provides a suggested 12-30 percent increase in salary above and beyond a teacher's 'regular salary for these types of positions:

Amounts will likely need to approach 12 percent to 30 percent of a teacher's base salary. And setting broad policies about hard-to-staff pay at a high level while giving district and school officials' discretion about allocation is likely the best way to learn what kind of portfolios will be most effective and how high premiums need to be in order to attract a top-notch pool. (Kowal et al., 2008, pp. 27-28)

A Promising Case Study Example

As stated in the *Qualified Teachers for At-Risk Schools: A National Imperative* by the National Partnership for Teaching in At-Risk Schools (2005):

In Chattanooga, Tennessee, the mayor's Community Education Alliance, in partnership with Chattanooga Neighborhood Enterprises Inc. and two local foundations, supports an incentive program to draw high-performing teachers to nine struggling inner-city schools. Teachers who transfer to the identified schools earn an extra \$5,000 a year. In addition, the program offers up to \$10,000 in equity to highly qualified teachers in the program and a low interest second mortgage to all teachers who teach in one of the designated schools. The success of this initiative is demonstrated in the improved test scores of students in the nine schools. Based on data from the Terra Nova achievement tests in 2002, the Public Education Foundation reported increases in reading and mathematics. And as of 2004, the nine schools were showing higher academic gains on state tests than the top 10 percent of elementary schools. For more information, refer to the City of Chattanooga press release (www.chattanooga.gov/mayor/Press_Releases/CEA%20announces%20results%20504.htm). (p. 10)

A Promising Case Study Example

Executive Summary from Transfer Incentives for High- Performing Teachers: Final Results from a Multisite Randomized Experiment (Glazerman et al., 2013):

One way to improve struggling schools' access to effective teachers is to use selective transfer incentives. Such incentives offer bonuses for the highest-performing teachers to move into schools serving the most disadvantaged students... The intervention, known to participants as the Talent Transfer Initiative (TTI), was implemented in 10 school districts in seven states. The highest-performing teachers in each district—those who ranked in roughly the top 20

percent within their subject and grade span in terms of raising student achievement year after year (an approach known as value added)—were identified. These teachers were offered \$20,000, paid in installments over a two-year period, if they transferred into and remained in designated schools that had low average test scores. The main findings from the study follow.

Main Findings

- The transfer incentive successfully attracted high value-added teachers to fill targeted vacancies. Almost 9 out of 10 targeted vacancies (88 percent) were filled by the high-performing teachers who had been identified as candidates eligible for the transfer intervention. To achieve those results, a large pool of high-performing teachers was identified (1,514) relative to the number of vacancies filled (81). The majority of candidates did not attend an information session (68 percent) or complete an online application to participate in the transfer intervention (78 percent).
- The transfer incentive had a positive impact on test scores (math and reading) in targeted elementary classrooms. These impacts were positive in each of the two years after transfer, between 0.10 and 0.25 standard deviations relative to each student's state norms. This is equivalent to moving up each student by 4 to 10 percentile points relative to all students in their state. In middle schools, we did not find evidence of impacts on student achievement. When we combined the elementary and middle school data, the overall impacts were positive and statistically significant for math in year 1 and year 2, and for reading only in year 2. Our calculations suggest that this transfer incentive intervention in elementary schools would save approximately \$13,000 per grade per school compared with the cost of class-size reduction aimed at generating the same size impacts. However, overall cost-effectiveness can vary, depending on a number of factors, such as what happens after the last installments of the incentive are paid out after the second year. We also found there was significant variation in impacts across districts.

The transfer incentive had a positive impact on teacher-retention rates during the payout period; retention of the high-performing teachers who transferred was similar to their counterparts in the fall immediately after the last payout. We followed teachers during both the period when they were receiving bonus payments and afterward. Retention rates were significantly higher during the payout period—93 versus 70 percent. After the payments stopped, the difference between cumulative retention of the high-performing teachers who transferred and their counterparts (60 versus 51 percent) was not statistically significant. (p. XXV)

Strategic Recommendations

- Develop a systematic, multi-pronged, and sustainable approach to teacher recruitment and retention. This would require a cross-departmental team that is assigned to this effort and an evaluation plan to monitor the development, implementation, and outcomes of the strategies involved with this effort.
- Focus on targeted, immediate steps that can increase the number of highly effective teachers at the school sites.
- Develop a systematic approach to recruitment and hiring that might involve a turn-around team (including Human Resources). This team would likely be housed at the district level and be connected to a systematic turn-around model. Hiring, or at least the “screening” of candidates, would not be carried out at the district level by trained interviewers.
- Expand on the current recruitment bonuses and financial incentives to maintain staff stability of effective teachers and consider a tiered model that might pay additional bonuses to high performing teachers.
- Carefully consider how “high performing” teachers are identified. The identification process may include multiple measures of effectiveness that go beyond the state’s definition or district evaluation framework. Also consider which candidates would be the best fit for turnaround schools and who are willing to take on leadership roles at their school sites. A structured and rigorous selection process is recommended.
- Consider expanding the student day or teacher work day (or both) to create increased learning time for students and additional planning time and pay for teachers.
- Consider having the high performing teachers receive additional training and potentially take on roles as teacher leaders within the school. This could be tied to additional pay. See the example of teacher leaders in New York City Department of Education page 8.
- Consider formulating a strategy around collaborative teams, such as highly performing teacher cohorts, who can work collaboratively at targeted grade levels (i.e., pairs at each of the intermediate grade levels) to maximize their impact and to serve as teacher leaders at their school sites. One model for this is T3 initiative sponsored by the nonprofit organization Teach Plus (page 7). This model allows for flexible scheduling that occurs for these individuals to maximize their opportunities to work with students in a strategic way. Please note that a model such this will take additional planning by the district’s central office, and will involve developing an action plan for implementation and monitoring.
- Consider implementing an intensive mentoring program in which mentors dedicate their entire day or half of their work day to mentoring and coaching first and second year teachers. A more detailed plan for mentorship is beyond the scope of this paper. Therefore, additional research and planning would be needed to develop this model.

- Consider developing a public/private partnership that also includes teacher certification programs and universities. One example of this is Project L.I.F.T. in North Carolina's Charlotte-Mecklenburg Schools, which is mentioned on page 8. This partnership works collaboratively toward long-term solutions to teacher preparation, recruitment, professional development, and developing teacher leaders. This might include university partnerships to allow for teachers receive advanced degrees for free or for reduced tuition.

Additional Strategies

Below is an overview of strategies provided by the National Comprehensive Center for Teacher Quality (Hayes, 2009).

1. Provide incentives and policies to redistribute the teacher workforce.
 - 1.1. Restructure teacher pay to encourage the voluntary redistribution of the teacher workforce.
 - 1.2. Provide scholarships and forgivable loans for teachers who teach in geographical shortage areas.
 - 1.3. Combine pay incentives with cohort assignments.
 - 1.4. Combine pay incentives with improved working conditions.
2. Improve working conditions for teachers in urban and rural schools.
 - 2.1. Support new teachers.
 - 2.2. Support school leaders so they can support teachers.
 - 2.3. Create professional learning communities and career ladders for teachers.
3. Partner with institutions of higher education to prepare teachers for urban and rural school settings.
4. Develop high-quality alternative certification programs.
5. Grow your own.
6. Improve hiring practices.
7. Create partnerships to address out-of-school issues that affect recruitment and retention.
 - 7.1. Provide housing assistance.
 - 7.2. Provide reimbursement for moving expenses.
 - 7.3. Promote business partnerships.

References

- Ableidinger, J. & Kowal, J. (2010) Shooting for Stars: Cross-Sector Lessons for Retaining High-Performing Educators. *Public Impact*.
http://opportunityculture.org/images/stories/shooting_for_stars_2010.pdf
- Amrein-Beardsley, A. (2007). Recruiting expert teachers into hard-to-staff schools. *Education Digest*, 73(4), 40. Retrieved from
http://www.pdkmembers.org/members_online/publications/Archive/pdf/k0709amr.pdf
- Banker, R. D., Lee, S., & Potter, G. (1996). A field study of the impact of a performance-based incentive plan. *The Journal of Accounting and Economics*, (2). 195.
- Borman, G. D., & Dowling, N. M. (2008). Teacher attrition and retention: A meta-analytic and narrative review of the research. *Review of Educational Research*, 78(3), 367-409.
doi:10.3102/0034654308321455
- Boyd, D., Lankford, H., Loeb, S. & Wyckoff, J. (2005). Explaining the short careers of high achieving teachers in schools with low-performing students. *American Economic Review*, 95(2), 166-171.
- Darling-Hammond, L. (2010). Recruiting and retaining teachers: Turning around the race to the bottom in high-need schools. *Journal of Curriculum and Instruction (JoCI)*. Vol. 4(1), 16–32. <http://doi.org/10.3776/joci.2010.v4n1p16-32>
- Glazerman, S., Protik, A., Teh, B. R., Bruch, J., & Max, J. (2013). Transfer Incentives for High-Performing Teachers: Final Results from a Multisite Randomized Experiment. NCEE 2014-4003. *National Center for Education Evaluation and Regional Assistance*.
- Hanushek, E.A., Kain, J.K., & Rivkin, S.G. (1999). Do higher salaries buy better teachers? Cambridge, MA: National Bureau of Economic Research. Retrieved from
<http://www.nber.org/papers/w7082.pdf>
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (2004). Why public schools lose teachers. *Journal of Human Resources*, 39(2), 326-354.
- Hayes, K. (2009). *Key Issue: Recruiting Teachers for Urban and Rural Schools*. National Comprehensive Center for Teacher Quality.
- Kowal, J., Hassel, B. C., & Hassel, E. A. (2008). Financial incentives for hard-to-staff positions. *Cross-Sector Lessons for Public Education*, (November), 1–38.
- Loeb, S., & Page, M. E. (2000). Examining the link between teacher wages and student outcomes: The importance of alternative labor market opportunities and non-pecuniary variation. *Review of Economics and Statistics*, 82(3), 393–408.
<http://doi.org/10.1162/003465300558894>

National Partnership for Teaching in At-Risk Schools. (2005). *Qualified Teachers for At-Risk Schools: A National Imperative. An Inaugural Report from the National Partnership for Teaching in At-Risk Schools.*

New York City Schools. Retrieved on December 1, 2015 from the New York City Schools' website: [Http://schools.nyc.gov/Teachers/TeacherDevelopment/TeacherLeaderRoles.htm](http://schools.nyc.gov/Teachers/TeacherDevelopment/TeacherLeaderRoles.htm).

Petty, T. M., Fitchett, P., & O'Connor, K. (2012). Attracting and keeping teachers in high-need schools. *American Secondary Education*, 40(2), 67-88.

Reform Support Network. (2014). *Recruiting and Retaining Highly Effective Turnaround Teachers*, (March).

Snipes, J., Horwitz, A. (2007). Recruiting and retaining effective teachers in urban schools. The Council of Great City Schools Research Brief.

The New Teacher Project. (2012). *Recruitment and Hiring: How a disciplined hiring process can help schools choose the right team.* Teacher Talent Toolbox.