Understanding Minnesota's Q Comp Program

Evidence and Lessons Learned

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Executive Summary

Minnesota's Quality Compensation program (Q Comp) is a unique initiative that seeks to provide districts with the tools to better support teachers in developing their professional practice. The program requires participants to utilize four specific components while still allowing wide flexibility in local design and implementation. Districts and charter schools seeking to adopt or amend Q Comp plans can learn from both the existing body of research and other districts' experiences with implementation.

This paper includes a literature review of each component individually, a summary of existing research about Q Comp specifically, and a synthesis of common themes from interviews with various school staff, union representatives and other local experts around the Twin Cities metro. Using that knowledge and an assessment of the current political landscape in the state, we conclude with five recommendations for districts. These recommendations apply to any district or charter school planning to adopt or amend a Q Comp plan.

We recommend that districts or charter schools:

- Start the process by getting on the waiting list now.
- Teachers take the lead in writing the plan.
- Think about needs and professional development locally.
- Use opportunities for innovation, but also integrate into existing strategy.
- Be responsive and flexible about implementation.

Understanding Minnesota's Q Comp Program

Minnesota's Quality Compensation program (Q Comp) is a unique initiative that seeks to provide districts with the tools to better support teachers in developing their professional practice. The program aims to improve student achievement through providing teachers with targeted professional development, more opportunities for career advancement, additional pay based on their performance, and improved evaluation systems. Importantly, Q Comp does not dictate what districts must do within each of these components. Instead, districts have substantial freedom to use the Q Comp funding provided by the state to integrate Q Comp components into existing initiatives and tailor them to meet the specific needs of their teachers.

While districts may appreciate the flexibility of Q Comp, determining how to implement the program components and integrate them into district initiatives, priorities, and needs takes careful planning. How do districts know what strategies would improve teachers' experiences? How do they choose to allocate funding between the four components? Before making these decisions, districts would benefit from understanding what types of Q Comp strategies are known to improve student achievement as well as how districts across the state are innovating within each component to support teachers.

The purpose of this report is to explore what is currently known about the effectiveness of Q Comp - both in terms of its individual components as well as its overall effect on teachers and students - and to provide recommendations for districts seeking to develop or fine tune their Q Comp plans. We conducted an in-depth literature review of each Q Comp component to identify the evidence-base, reviewed evaluations of Q Comp to understand its specific effects on student achievement, and conducted eight interviews of district and state education leaders to learn more about how Q Comp is implemented today. We hope this provides a starting point for districts seeking to understand the possibilities and opportunities within the Q Comp framework.

The paper begins in Section I with an introduction to Q Comp and details about its four main components: career advancement, job-embedded professional development, teacher development and evaluation, performance pay and reformed salary schedules. In Section II, we review the broad research base of each Q Comp component and consider the potential effects of similar initiatives on students and teachers. Section III explores the emerging body of literature focused on the effects of Q Comp in particular. In Section IV, we provide context for how districts across the state are designing Q Comp plans and lessons learned from previous implementation studies of Q Comp. Section V then explores the current political situation and likely future of the program. Finally, we conclude in Section IV by providing broad recommendations for developing or adjusting a Q Comp plan based on these findings.

I. What is the Quality Compensation Program?

The Minnesota Legislature passed the law creating the Quality Compensation (Q Comp) program in 2005. With the momentum gained from a successful three-year pilot program as well as support from former Governor Tim Pawlenty, Q Comp was largely a bipartisan effort to improve the experiences of teachers and the achievement of students. Unlike similar reforms in other states, Minnesota's Q Comp is a voluntary program. In the almost fourteen years since the bill's passage, the Minnesota Department of Education (MDE) has approved more than 100 school districts and 75 charter schools to implement Q Comp, accounting for about half of the state's students. Others have applied and are awaiting funding. Below, we identify both the overarching theory of action of the program and provide details about each specific component that districts must implement.

Q Comp's Theory of Action

Q Comp's explicit goals include recruiting and retaining more high-quality teachers - especially in challenging assignments - and increasing student learning by providing incentives and supports to teachers. The program's theory of action relies on four separate mechanisms to achieve these goals, called components. They are: Career Advancement Options; Job-Embedded Professional Development; Teacher Development and Evaluation; and Performance Pay and Reformed Salary Schedules.[1]

Although increasing student achievement is an explicit goal, all four Q Comp components focus on teachers' professional experiences. Two components reward teachers for their contributions to schools by providing opportunities for advancement and pay for performance. The other two focus on training and feedback to help teachers improve their practice. The hope is that, over time, these changes to teachers' experiences will result in better teaching and, thus, higher student achievement.

Q Comp Components & Requirements

To receive Q Comp funding, districts (or other eligible entities) must go through a detailed application process with the Minnesota Department of Education (MDE) and then update the state each year on any changes. Benefits of this process include up to $260 per student to help pay for the program ($169 from the state and $91 through levies). To be approved for participation, districts must implement each of the four core components in compliance with state expectations. Although there are guidelines for each component, districts have substantial flexibility in how they choose to meet the requirements. The components and their associated requirements are described in detail below.

[1] There were originally five in number, but "Performance Pay" and "Alternative Salary Schedule" have since been consolidated into one in the application and training materials on MDE's website.

Career Advancement Options. This component focuses on providing teachers with opportunities for growth in their careers. Specifically, MDE requires that districts create "teacher leader" roles to support professional development in the school buildings. The roles are open to classroom teachers and must be accompanied by some form of compensation. MDE recommends using teacher leaders as coaches, mentors, or peer observers, and empowering teacher leaders to develop new instructional strategies to share with other building staff. The assumptions are that providing room for professional growth may keep good teachers in the profession and that teacher leaders may be able to improve the practice of other teachers in the district.

Job-Embedded Professional Development. The second component leverages the new teacher leader roles to provide targeted opportunities for learning and growth to teachers. Districts must offer data-driven professional development (PD) focused on content and pedagogy, to be delivered by the new teacher leaders. These PD opportunities should be site-based, collaborative, regularly-occurring, and explicitly focus on various student groups. Teacher mentoring and induction programs for newer staff should support PD learning. MDE recommends providing at least three hours of PD each month to staff members through weekly sessions.

Teacher Development and Evaluation. The evaluation component attempts to provide guidelines for how teachers should be observed and evaluated across the state. Participation districts must implement a three-year professional review process that incorporates teacher evaluations and an individual growth and development plan. Trained evaluators will use rubrics to evaluate teachers through observations during review years, and peer observers will provide feedback in off-years. MDE recommends a structured observation schedule and multiple observers to minimize bias.

Performance Pay and Reformed Salary Schedules. The final component provides districts with the opportunity to reward teachers for high performance. Participating districts must align teachers' pay to at least three measures of performance: student growth, schoolwide achievement, and teacher evaluations. However, there is no guidance for the amount of compensation nor the requirements to earn the bonus. MDE recommends using district strategic plans or the World's Best Workforce guidelines to set achievement and growth goals. Districts may also consider implementing "hard-to-staff" bonuses or additional licensure and education incentives.

While Q Comp itself may be a unique effort, each component of the program has a long history of implementation around the country. When developing plans, districts must make trade-offs between components within the limited funding available. To do so effectively, decision makers should be familiar with what kind of evidence exists about how and when specific components can support student learning. We summarize that research in the following section.

II. What is the evidence base for programs like Q Comp?

The four key components of Q Comp plans have been the focus of significant research in recent years as policymakers work to retain and improve the teaching workforce. While Q Comp is a holistic program, the four components are not always studied together. Furthermore, Q Comp is a voluntary program that emphasizes local control, giving districts the flexibility to draft unique plans that fit the needs of the local district. Thus, it is instructive to look at each component in turn.

Below, we highlight the benefits, challenges, and best practices of each area of the Q Comp application based on current, high-quality research. Any district attempting to design (or modify) its Q Comp plan can use the findings to support decision making around how to fulfil the requirements within each component to best support teachers and students.

Component 1. Career Advancement Options

History and Context

Minnesota's Q Comp career advancement component provides teachers with career opportunities that allow them to earn additional compensation for leadership roles while continuing to teach on a part-time basis (Choi, 2015). Teacher career advancement and career ladders are not new ideas: For over two decades, school districts have experimented with different forms of instructional coaching and distributed school leadership (Kraft, Blazer, & Hogan, 2017). These initiatives began in the 1990s, with the Reading Excellence Act (1999), No Child Left Behind (2002), and the Individuals with Disabilities Act (2004). Yet, a common definition of "teacher leadership" does not exist. As a result, career advancement programs look different throughout schools but ultimately intend to support teacher leadership and compensate them accordingly (York-Barr & Duke, 2004).

The American Federation of Teachers (2013) suggests that developing career ladders in schools provides clarity for teachers and administrators and increases the instructional capacity that exists within their districts. Teacher leadership roles vary greatly across schools and districts. Some include formalized structures that include school management, program evaluation, and professional learning communities (York-Barr & Duke, 2004; Kraft, Blazer & Hogan, 2017). Similarly, other school districts have challenged the traditional school model that includes the principal as the primary leader by identifying how leadership can be distributed across a school (Heck & Hellinger, 2009). Minnesota's Q Comp program requires schools to offer leadership opportunities that include paid compensation as instructional coaches, mentors, and peer observers.

Effects of teacher advancement on teachers and schools. School districts have implemented a variety of teacher career advancement opportunities. A three-year study from the Center for Educator Learning and Effectiveness at Pearson, the National Network of State Teachers of the Year (NNSTOY), the National Education Association and Public Impact, and the American Federation of Teachers highlights eight case studies from schools across the United States (Natale, Gaddis, Basset & McKnight, 2016). These case studies, which rely mostly on qualitative data, show that teacher leadership opportunities can have a positive impact on retaining effective and experienced educators. The case studies also note, however, that some teacher career ladders have increased teacher turnover in districts where teachers move around schools as they move up the ladder. The 2019 Minnesota Teacher Supply and Demand report asserts that providing formal mentoring programs has made "some, or a very big difference" in schools' retention of licensed teachers (p. 19).

When teachers continue to work as leaders at their school site, Heck and Hellinger (2009) find "support for the hypothesis that school leadership and capacity building are mutually reinforcing in their effects on each other over time. This reciprocal effects model of school improvement is underpinned by the notion that in settings where people perceive stronger distributed leadership, schools appear better able to improve their academics" (p. 680). Devos, Tuytens, and Hulpia (2014) find that distributed school leadership may contribute to teachers' commitment to the school. Yet, York-Barr & Duke (2004) find conflicting evidence in a meta-analysis regarding the effects of teacher leadership at the school level, especially when districts scale up their efforts.

Conflicting evidence also exists regarding the impact on career advancement opportunities for student learning outcomes. In case studies about the effectiveness of teacher advancement opportunities on student achievement, limited anecdotal evidence suggests that teachers have seen growth in student achievement in elementary math (Natale, Gaddis, Basset & McKnight, 2016). Heck and Hallinger (2009) also show an indirect effect of distributed leadership on student growth rates in math.

Limitations

The ambiguity of teacher career ladders and teacher leadership contributes to the difficulty in identifying any impact on student achievement. As York-Barr and Duke (2004) assert from their meta-analysis of research on teacher leadership, most studies are small-scale case studies that rely on qualitative data. These case studies use anecdotal evidence from focus groups and, in many cases, the career advancement opportunities may be part of other district-wide school reform programs (Natale, Gaddis, Basset & McKnight, 2016). Moreover, it is difficult to quantify "teacher leadership", thus limiting the usability of quantitative studies. Kraft, Blazer, and Hogan (2016) posit that the variability in teacher coaching programs across districts complicates the findings as some teacher coaches may informally work with other teachers and do not receive financial compensation for their work.

Component 2. Job-Embedded Professional Development

History and Context

As schools look to improve, evidence suggests that progress depends on teachers' individual and collective capacity for promoting student achievement (Stoll, Bolam, Mcmahon, Wallace & Thomas, 2006). While professional development is a hallmark of the teaching profession, criticism is high for one-day single-shot workshops that are often superficial and feel fragmented from deeper issues of teaching and learning. In an attempt to mitigate this challenge, No Child Left Behind (NCLB) in 2002 set five criteria for high-quality professional development, including that professional development be sustained and intensive, have a lasting impact on classroom instruction and student achievement, and allow teachers to improve their content knowledge and pedagogy (Yoon, Duncan, Lee, Scarloss & Shapley, 2007). The reauthorization of NCLB as the Every Student Succeeds Act (ESSA) reaffirms that teachers should have access to sustained, job-embedded, data-driven, and classroom-focused professional learning; similarly, first and second-year teachers should have access to induction and mentoring programs (U.S Department of Education, 2015). MDE's Q Comp funding application asks districts about their plans for job-embedded professional development, specifically naming professional learning communities and novice teacher induction and mentoring, and gives districts the opportunity to discuss additional professional development plans.

Professional Learning Communities

While a universal professional learning community definition does not exist, broad consensus suggests a group of people sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way (Stoll et al., 2006). The impact of professional learning communities (PLCs) can be examined in two ways: By either their impact on teacher capacity or by their impact on student achievement. Both ways show mixed findings. First, the mixed results that PLCs receive for building teacher capacity can be found in implementation issues. For PLCs to be effective in growing teacher capacity, they need to focus on how to improve the content and pedagogical knowledge, teach best practices, and redirect teachers' attitudes to students' learning requirements (Althauser, 2015, p. 210). However, PLCs often fail to provide meaningful spaces to increase teacher capacity if they do not distribute teacher knowledge or expertise (McLaughlin & Talbert 1993), which may reinforce substandard practice (Stoll et al., 2006). District and state performance evaluations can also stifle PLCs' effectiveness if teachers are not oriented toward learning because they do not believe they have room to grow in their practice . Evaluation systems that rate teachers as "effective" or "meeting expectations" on their official performance evaluations (Jacob & McGovern, 2015 p.25) may perpetuate this mindset. Beyond focusing on content and pedagogical knowledge, PLCs need to be connected to other school initiatives and aim to build strong working relationships among teachers. However, most teachers in the United States do

not have access to professional development that meets all these criteria (Wei, Darling-Hammond, Andree, Richardson & Orphanos, 2009).

A second challenge in measuring the effect of PLCs on increased teacher capacity is that teachers self-report much of the data. TNTP (Jacob & McGovern, 2015) conducted a large-scale study of over 10,000 teachers in three large school districts and investigated the links between professional development, such as PLCs, and teacher improvement. The study found that between teachers rated as improving and teachers not improving, their perceptions of their own improvement and the usefulness of professional development opportunities were the same (Jacob & McGovern, 2015).

Unfortunately, few studies exist that examine the results that job-embedded professional development has on student achievement. This is due to the extreme difficulty of examining causal relationships within the web of complex interactions involved with interventions, teaching, learning, and assessment (Althauser, 2015, p. 210). In 2007, the Institute of Education Sciences- Regional Education Laboratory Southwest conducted a meta-analysis of 1300 studies identified as potentially addressing the effect of teacher professional development on student achievement. Yet, only nine studies could identify causal impacts of professional development on student achievement (Yoon, et al, 2007). The content and substance of each of these studies varied, making it difficult to draw conclusions about which professional development opportunities improve achievement (Yoon et al., 2007).

Mentoring

While the overall objective of teacher mentoring programs is to give new teachers a local guide to schools, the content of mentoring programs varies greatly in their program lengths, who their mentoring programs serve, and how mentors are selected (Ingersoll & Strong, 2011). A review of 15 empirical studies on mentoring found that beginning teachers who participate in a structured mentoring experience report higher satisfaction and perform better on various aspects of teaching, such as creating workable lesson-plans, and keeping students on task (Ingersoll & Strong, 2011).

However, the connection between mentoring and student achievement is also mixed in the literature. Some studies indicate that novice teachers participating in structured mentoring programs report higher scores on achievement tests than peers not participating in mentoring programs (Ingersoll & Strong, 2011, Mathur, Gehrke & Kim, 2012). On the other hand, other studies report that the extra support for new teachers may not immediately translate into student achievement during the teacher's first year. A large scale randomized control trial on teacher induction and mentoring completed by Mathematica Policy Research found that there were no differences in teacher attitudes, practices, and retention or student achievement between beginning teachers receiving mentoring compared to those who were not; rather, gains in student achievement are seen a few years after participating in mentoring programs (Glazerman

et al, 2010). These findings suggest that there may be some longer-term promise in investing in highly structured mentoring programs that emphasize contact frequency and the mentor-mentee match (Mathur, et al, 2012).

Component 3. Teacher Development and Evaluation

History and Context

In order to support teachers' continuous improvement, teachers need to be assessed and evaluated. Rigorous teacher evaluation plans are built to provide such assessment. Teacher evaluation has been a central component of legislation to improve teacher quality since 2002's NCLB (Pullin, 2013). Race to the Top grants further incentivized expanding the use of evaluation plans and using them to inform human resources decisions (Aldeman, 2017). Now that ESSA allows for even greater latitude in creating evaluation plans, 46 states have statutes in place in relation to teacher evaluation (Donaldson, 2016). In Minnesota, as in most other states, teacher evaluations contain two main components: classroom observations and student achievement data. While teacher evaluation is politically popular, the research regarding its impact on student achievement and teacher retention, the two main goals of Q Comp plans, is mixed.

Teachers want to be held accountable (Donaldson, 2016; Moran, 2017), and formal evaluations can be one tool to provide that accountability. Using a systematic evaluation rubric provides both teachers and administrators with a shared understanding of what constitutes effective teaching, and when quality feedback is provided by the observer it can be used to improve teaching practices (Reddy et al., 2018; Stechter et al., 2019). Similarly to job-embedded professional development, the difficulty in implementing quality evaluations is largely dependent on the capacity of the people working in each building.

Classroom Observation

Classroom observation is the hallmark of most teacher evaluation plans. Drawing from the Obama-era reforms that led to many districts implementing rigorous evaluation systems, the foundational theory of action is that teacher quality is the most important in-school contributor to student success. However, if all teachers are considered to be satisfactory (as is evidenced by TNTP findings that 99% of teachers are rated as such), then teachers are interchangeable "widgets" (Aldeman, 2017). Recent scholarship on the distribution of teacher effectiveness shows that even with these more rigorous systems in place, the total percentage of teachers rated unsatisfactory remains unchanged (Kraft & Gilmour, 2017). Possible explanations include a hesitance on the part of administration to give low ratings because of time constraints, capacity challenges regarding supporting improvement plans, or the difficulty in replacing ineffective teachers (Kraft & Gilmour, 2017; Stechter et al., 2019). Additionally, Salazar (2018)

highlights another challenge in adopting a rigorous evaluation model: The current classroom evaluation models used nationally are not appropriately culturally responsive and further marginalize communities of color.

Effects of teacher evaluation on students and teachers. By and large, research cannot confirm that rigorous teacher evaluation plans have a positive impact on student achievement. A recently released RAND study (Stechter et al., 2019) found that sites were successful at implementing rigorous teacher evaluation, but with minor exceptions it had no impact on student achievement or drop-out rates. Similar studies have found the same result: Rigorous teacher evaluation cannot be shown to have a positive impact on student achievement (Cullen, Koedel & Parsons, 2016; Steinberg & Sartain, 2015). Results between schools can vary, but relying solely on rigorous teacher evaluation as a means to improve student achievement is inadequate.

Rigorous teacher evaluation can bring positive changes for teacher satisfaction. Teachers and administrators both value the way the practice allows for evidence-based conversations regarding teaching methods. Teachers report spending more time on goal setting and paying more attention to student data (Donaldson, 2016). There is a tension between using teacher evaluation as an accountability measure versus as a tool for improvement (Bradford & Braaten, 2018; Stechter et al., 2019; Kraft & Gilmour, 2017). To the degree that teachers feel the evaluation exists for their improvement and not as a high-stakes accountability measure, they view the process as more favorable (Ford, Urick & Wilson, 2018). It appears that the person who conducts the evaluation matters, too. Teachers respond more favorably to a colleague than an administrator (Ford et al., 2018), though there is evidence that those same colleagues are uncomfortable in their role as evaluators. These peer evaluators tend to give higher scores and are less likely to use the findings to have in-depth conversations regarding best practices (De Lima & Silva, 2018). In general, the “social validity” of the process is important. The more transparent the process of developing evaluation measures and implementation, the more likely teachers will buy in and be supportive of the use of the evaluation (Reddy et al., 2018; Reinhorn, Johnson & Simon, 2017). While a well-implemented evaluation can contribute to improved teacher satisfaction, recent scholarship shows that rigorous evaluation systems do not have an impact on retention overall, though significant variation exists at the individual and school levels (Robertson-Kraft & Zhang, 2018).

Student Achievement Data and Value-Added Methods (VAM)

Classroom observation and its attendant feedback constitute part of the teacher evaluation model. The other big bucket is student achievement data (Reddy et al., 2018). Collectively known as Value Added Measures (VAM), student achievement data typically refers to standardized test scores. Schools choose to use classroom level data or school level data, and teachers are rated higher for student growth, or lower for unchanged student scores. The goal of public education is for students to learn, so it seems obvious that student achievement data

contribute to a teacher's evaluation (Kane, Kerr & Pianta, 2014), but there are significant challenges to consider.

Researchers have expressed concern that conclusions about teacher effectiveness from VAM may be biased to the extent that some teachers are assigned more or less challenging groups of students. Overall, teachers do not have a clear understanding of how VAM scores are used and feel some degree of hopelessness about their use as a measure of effective teaching (Moran, 2017; Pressley, Roehrig & Turner, 2018). Many teachers teach subjects or grades with no standardized tests associated with them (Steinberg & Sartain, 2015), and typical standardized tests assess only grade-level learning, nothing before or after, so they may not truly capture student achievement (Darling-Hammond, 2015). Legal challenges should be considered as well. In 2017, 11 legal cases challenged the VAM component of teacher evaluation models, particularly when teachers had been rated effective by principals but received a final rating of ineffective due to weighting of student achievement scores (Hazi, 2017).

Effects on teachers and students. Teachers want to make data-driven decisions, but they are less supportive when student achievement scores are tied to their evaluation. One teacher described the conflict in this way: "Now when I administer the test, as opposed to just looking at the data and saying, 'Oh, this kid dropped; why did he drop?', there's that immediate thought, 'Oh no, this kid dropped; how is that going to affect my TEVAL score?" (Donaldson, 2016). Recent scholarship shows that releasing VAM ratings for teachers could lead to increased student achievement, as shown in an analysis of Los Angeles teachers. Teachers with low reported ratings showed increases in their students' math and English scores while highly rated teachers saw no change (Pope, 2019). Unfortunately, this finding is predicated on some teachers receiving low ratings, which earlier research suggests rarely occurs.

Component 4. Performance Pay and Reformed Salary Schedules

History and Context

The Q Comp component that gets the most time in the press is the performance pay component, partly because of the shift it represents from the traditional model of teacher compensation. The majority of U.S. public school districts compensate teachers using salary schedules, which typically equalize pay among district teachers with respect to years of service in the district and educational attainment. In these districts, teachers with similar educational backgrounds enter the district at the same salary and receive pre-determined salary increases each year.

Teacher incentives are a market-based shift to this system. The theory behind incentives posits that increasing pay for teachers that perform better or work in more difficult conditions will help

retain better teachers and encourage teachers to improve. There are two distinct types of teacher incentives, both addressed by Q Comp: performance pay and hard-to-staff incentives.

Teacher Performance Pay

Teacher performance pay refers to programs that attempt to compensate effective teachers. Performance pay programs have become increasingly popular in schools and districts since the 1990s and the design and implementation of the programs vary greatly. In general, performance pay programs give teachers bonuses or salary increases each year based on the individual teacher's performance or students' academic outcomes.

There are a number of different ways performance can be measured, but they include student growth on standardized tests, observational ratings of teaching quality, student or parent surveys, and participation in professional development. Many districts use a combination of factors to determine a teacher's bonus or salary increase. Teacher performance pay programs generally aim to accomplish two types of goals: increasing student achievement and increasing teacher retention. We will discuss both in turn.

Effects on Teachers and Students. A number of studies have conducted rigorous randomized control trials of teacher performance pay programs. The largest quality randomized experiments are from countries in Asia and Africa, where conditions are quite different from U.S. public schools (Muralidharan, 2011; Glewwe, 2010). These studies find significant positive effects on student test scores when teachers are paid for their students' outcomes. However, it is unclear how valid these studies are in the U.S. context as the infrastructure for teaching and the average teacher salary differ substantially.

Instead, we can look to experiments conducted in the United States to determine the program's efficacy. Most randomized trials in U.S. schools find no impact on student achievement. In fact, the largest and well-funded experiments consistently found no effect over multiple years (Marsh, 2011; Glazerman, 2012; Springer, 2012). These studies in New York, Chicago, and Nashville were intended to provide rigorous evidence of the impact on student achievement over three to four years of implementation and all were found to have implemented the program with a reasonable level of fidelity.

A few smaller experiments, however, do find small positive effects. For example, Fryer et al. (2012) find that teachers do respond to incentives when they are delivered first and taken away if goals are not met (i.e., teachers are loss-averse). Other experiments that find positive effects are either nontraditional in implementation or too small to be broadly applicable in other contexts (Goodman, 2013; Chiang, 2017).

There is also rich non-experimental evidence, which may be applicable to more contexts because the range of districts studied is greater. A number of studies have found positive effects on student achievement associated with performance pay (Lavy, 2002; Lavy, 2009; Schacter, 2005; Figlio, 2007; Goldhaber, 2012; Gius, 2013; Shifrer, 2013; Dee, 2015; Balch,

2015). For example, Lavy (2009) found that providing cash bonuses to teachers for student outcomes resulted in improved scores and improved pass rates in Israel. He noted that the mechanisms driving the change appeared to be teachers improving their practice: new teaching methods, more instructional time, and better responsiveness to students' needs. Another study examined Austin Independent School District's implementation of the REACH Program, a district-run performance pay system (Balch, 2015). The evaluation concluded that implementation of performance pay resulted in gains to student achievement in both math and reading after only one year. These are promising findings, but not all of the studies account for the problem of selection that exists outside of randomized experiments.

One of the mechanisms to improve student achievement is to retain higher-quality teachers over time, and it could be that the three to five year period of most studies is too short to fully capture the benefits of retaining better teachers. Some of the studies also look for effects on teacher attitudes and retention in schools to determine whether there could be more effects on student achievement in the long term. Results from two large experiments did find better retention in participating schools over a three-year period (Glazerman, 2012; Chiang, 2017). However, a third found no impact on attitude or retention (Marsh, 2011). Although measured in the short term, it is also unclear if performance pay assists with teacher retention.

In summary, the fact that the experimental and non-experimental findings do not agree coupled with the lack of definite evidence on retention is worrying. At best we can say the evidence for using teacher performance pay to improve student achievement is mixed and that longer-term studies are needed to better understand how it affects teachers and students.

Lessons for Implementation. It could be that findings about incentives' are mixed because of implementation issues, and – at the very least – the large experiments provide rich information about the successes and failures associated with implementing these programs.

One major issue that arose in the studies about implementation is the sustainability of performance pay initiatives. The Teacher Incentive Fund, for example, was a national grant program to help districts develop performance pay initiatives. The study found small and not significant gains in student achievement in the districts studied, but did note that many districts did not plan to continue their performance pay initiative after the grants ended because of the cost and lack of perceived effect (Chiang, 2017). This may suggest that participating districts did not see enough benefits to justify the cost of maintaining the program, or could be a reflection on the trade-offs necessary due to tightening budgets.

Another issue is whether the supporting mechanisms get implemented with fidelity. For example, many performance pay programs include increased or specialized professional development opportunities and changes to observation and evaluation protocols for school staff. Findings on implementation are mixed. The study of the Teacher Advancement Fund in Chicago, for example, found that participating teachers had more access to mentors and other professional learning (Glazerman, 2012). However, a Teacher Incentive Fund study found that only about half of schools implemented all aspects of the program (Chiang, 2017). A third study

found that teachers often didn't respond to incentives by seeking more professional development or support (Springer, 2012).

Finally, the literature provides some warning about performance pay program design. Goodman (2012) notes that when teachers have more of an incentive to "free-ride" they also respond less positively to the incentive. Some incentives structures are "diluted" because of necessary compromises with unions to ensure approval. When this happens, Goodman argues that incentives can become so minimal they no longer have any effect on student achievement.

Hard-To-Staff Incentives

The second type of program provides incentives for teachers to work in hard-to-staff positions. When schools are particularly hard to staff due to teacher turnover, districts can provide bonuses each year to teachers who work there. The incentives vary in size and may also be targeted at individual grade-levels or subjects. Hard-to-staff incentives are also becoming more common, but they are the subject of far fewer studies. While incentives in other fields take many forms, the hard-to-staff incentives for Q Comp are focused on salary bonuses. Thus, this section will not discuss the rich literature associated with other hard-to-staff incentives, such as loan forgiveness, that are common in other fields.

Hard-to-staff incentives are intended to increase retention at struggling schools and help keep highly qualified teachers in important, but challenging, positions. The outcomes measured are typically associated with retention or student achievement, but there have not been many causal studies. The findings that are available, as well as lessons for implementation, are discussed below.

Effects on Teachers and Students. Very few empirical studies exist that connect hard-to-staff incentives with teacher retention or with student outcomes. Of the four identified, however, all demonstrated at least some of the desired effects on retention or achievement. For example, a study of the Teacher Transfer Initiative (a U.S. program focused on getting teachers into high-need schools) found that paying teachers to move to new schools resulted in higher rates of retention as well as significant increases in student achievement (Glazerman, 2013). Similarly, a study in Norway found that increasing pay for schools with retention issues subsequently reduced attrition, and a study from North Carolina found that bonuses in specific subjects and schools reduced turnover significantly (Falch, 2011; Clotfelter, 2008). A fourth study did find that incentives encouraged teachers to go to high-need schools but failed to keep them there for long (Steele, 2010).

These findings provide significant evidence that incentives can work to shift teacher behavior and preferences when it comes to placement.

Lessons for Implementation. While the findings above are meaningful, it is important to recognize that the studies of hard-to-staff incentives provided substantial compensation to the teachers involved. In the Norway study, for example, the teachers were paid approximately an

additional ten percent compared to other teachers (Falch, 2011) and in both the Glazerman and Steele studies the bonus was $20,000. These amounts may be impossible for many districts to match considering the upfront nature of the investment.

A second important lesson is that not all teachers will be induced to stay based on incentives. In the Teacher Transfer Initiative, for example, only 32 percent of target teachers attended an information session and fewer than 25 percent filled out an application (Glazerman, 2013). Even identifying 1,500 potential candidates, the program was only able to fill 81 slots (representing 88 percent of the openings). This suggests that incentives within smaller districts may not be enough to induce movement, even when the payment opportunities are substantial.

Summary of Component Literature

Reviewing the literature on the four Q Comp components suggests mixed results for its impacts on teacher performance and student achievement. Given these results, however, there are overarching considerations within the larger literature base that could prove useful for developing and implementing a Q Comp plan.

1. **Context matters**. Within both a school building and a school district, the knowledge and expertise of teachers, administration, and staff - or lack thereof - impacts the ability to implement any new reforms. Knowing that there is no single method that will improve teacher practice and retention (Jacob & McGovern, 2015), schools and districts must pay attention to the unique context and needs of individual schools and communities.

2. **Alignment matters.** Any systems implemented to improve teaching and learning may or may not be aligned with each other and with the goals of the district and school campuses. As one district administrator stated, “The phrase ‘random act of school improvement’ is what pops into my head. We’re all out there trying to do our best but we’re not coordinating the efforts” (Jacob & McGovern, 2015, p. 28). Ensuring connections across strategies and programs within Q Comp district initiatives and taking the time to explain them to staff can support better outcomes for teachers (Wei et al, 2009; Hezel, 2009).

3. **Outcomes take time.** When results were seen within the literature, they took time to materialize. This is not to say that all programs yield results; rather, because of the nature of the programs, the reforms included within a Q Comp plan, and the need to refine the plans’ implementation, immediate outcomes may not occur.

These findings provide an important backdrop for districts seeking to develop a Q Comp plan. While based in quality research, however, none of the literature studies programs with the specific blend of components and local control as Q Comp. An emerging body of literature focused specifically on Q Comp’s effects on teachers and student achievement provides more concrete evidence related to Q Comp’s success in the state. These studies are explored below.

III. What is the evidence base for Q Comp in particular?

The wide variation in how Q Comp is implemented around the state complicates studies that aim to measure the program's impact on student achievement. A few studies, however, have tried to do just that. Although sparse, this literature is important to consider as Q Comp is a program that encompasses multiple mechanisms for improving teaching, and thus may have very different results from the national research that tends to investigate one method at a time.

The Q Comp studies provide insufficient evidence to claim that Q Comp has had a positive impact on student achievement, but they do show promise. The most rigorous empirical analysis comes from Sojourner et al. (2013). Using a large dataset on student achievement over seven years, the paper identifies statistically significant positive effects in both reading and math that increase the longer a district has participated in Q Comp. The paper also attempted to highlight whether choices in performance pay allocation had effects on student achievement. Interestingly, the researchers found no statistically significant differences in achievement based on the sizes or types of incentives for teachers. This suggests that the important aspect of Q Comp may not be any individual piece of the plan, but instead that the effects might simply come from having a cohesive system of local supports and incentives that fit districts' needs.

A 2009 evaluation of Q Comp also found that student achievement is positively related to the number of years a district has implemented the program (Hezel, 2009). Two other studies found no such evidence, but also use smaller datasets over shorter timespans (Choi, 2015; Schwartz, 2012). While neither conclusive nor experimental, these findings provide initial evidence that Q Comp may be resulting in improvements for students.

This is supported by findings relating to retention and practice. There is initial evidence that Q Comp participation results in a long-term increase in retention that appears after five years of participation (Choi, 2015). There is also evidence that teachers are changing their practice in response to Q Comp. An early pilot evaluation noted that teachers cited benefits from peer observation, common language, and expanded time for teachers to discuss their instructional practice (Wahlstrom, 2006).

These findings lend support to the idea that Q Comp can be used as a mechanism to change teachers' behavior in a way that benefits students, but more research is needed to solidify this conclusion. Districts need to carefully consider the local context and develop structures that meet their specific needs. It may not be enough to reproduce existing plans that work in other districts. However, we believe that districts will benefit from understanding the various ways others across the state have innovated within the Q Comp requirements and the lessons they have learned along the way. The next section provides details around the variation we see in Q Comp components as well as in how the plans were developed.

IV. What is the variation across Q Comp plans?

While the above literature review provides excellent context through which to examine Minnesota's Q Comp program, a direct look at districts' approaches can help illuminate existing best practices, challenges, and benefits. In this section, we identify the general themes and patterns of various districts' approaches to designing and implementing Q Comp. Then, we discern the variation within each of the four necessary components: career advancement opportunities, job-embedded professional development, teacher development and evaluation, and performance pay and reformed salary schedules.

Planning and Implementing Q Comp

As more districts look to identify positive patterns from Q Comp plans and implementation across Minnesota districts, three primary themes arise. These trends, which we gleaned from multiple interviews across the state, provide other districts with the opportunity to incorporate best practices from a variety of school districts.

1. Engaging teachers and paraprofessionals in Q Comp planning and writing. Several metro-areas district schools have acknowledged the importance in engaging teachers and paraprofessionals in writing and implementing the Q Comp plan. Hezel (2009) identifies that districts should pay attention to teachers' reactions to Q Comp and respond to them to ensure a smooth transition and maximum buy-in. For example, the Q Comp steering committee in one metro-area school district consisted of five teachers and five administrators. Additionally, labor management, that included both teachers and administrators, reviewed the performance appraisal system. Providing teachers and paraprofessionals with opportunities to write the Q Comp plans may also include teacher buy-in and increase investment within school sites. As one school district employee suggests, teachers taking ownership over the Q Comp plan allows them the ability to provide insight into areas such as career ladders, which keep teachers in the classroom but also provides opportunities outside of the classroom. Additionally, another district employee has identified that "the more teachers were involved, the more it changed practice on the ground." Teachers roles cannot be overemphasized. Yet, as several people cite, teachers also need to be given time to do the extra work and incentives that help move everyone in the same direction.

At the same time, it is important to keep in mind that both teachers and administrators should have equal investment in developing the Q Comp plans. Given the reality of both administrator and teacher turnover in school districts, a Q Comp plan that allows for both teacher and administrator feedback lends itself to a potentially easier transition if school leadership changes. MDE provides some training for Q Comp plan writing and workshopping. Moreover, MDE's staff have a statewide view of the Q Comp plans. This perspective can allow districts to have

targeted feedback when thinking about what is unique to districts, school sites, administrators, and teachers.

2. Providing teachers and administrators with training opportunities to understand the Q Comp plan and implementation. A district's Q Comp plan may look great on paper, but both large and small districts recognize the importance in providing school staff with the necessary training to implement the plans as intended. One school district posits that having well-respected teachers and school leaders provide training increases staff's willingness to transition to a new system. Moreover, site-specific Q Comp training gives staff the ability to ask questions and to better understand expectations. To help teachers understand why Q Comp is important, districts could focus their messaging on how Q Comp is integrated into other district strategies and initiatives (Hezel, 2009).

3. Designate a district Q Comp leader. Regardless of the school district's size, MDE recommends that every district allocates the resources to have one staff member manage Q Comp. Doing so not only helps delineate responsibilities, but it also provides opportunities for districts to learn from each other. Several districts in the metro area have regular coordinator meetings to share practices and problem solve.

These general recommendations can help set districts' Q Comp plans up for success during the planning process. When it comes to deciding how to design the program, districts would benefit from understanding their options. The next section details some of the different ways districts have met the component requirements.

Component 1. Career Advancement Options.

Different options exist for districts within the career advancement component. Multiple districts, however, recommend that the peer review role is an important part of career advancement for teachers.

Educators for Excellence (2014) recommends that districts should seek to place highly effective teachers in the newly created teacher leader roles to ensure they will be implemented well. In one metro-area school district, there is an extensive peer review process that allows teachers to work as peer coaches in three-year cycles and then return to their roles as classroom teachers. The cycle allows for one-third of the coaches to move off every year, thus allowing for a combination of new and experienced coaches.

In this same district, teachers go through an extensive application process: the Q Comp coordinator and administrator review their standing, there is a 7-year teaching requirement, they must have a Master's degree at the time of application, and they must have a continued contract status in the district. Given the large size of the school district, it makes sense to require a few years in the district. Next, candidates progress through a screening interview, a written interview, and a final panel with the entire team. Importantly, coaches are either elementary or secondary (while middle school sometimes cross over). Often high school

teachers prefer a coach who is someone in their content area: As a result, there are frequent conversations regarding the importance of observations focusing on instructional best practices. Finally, this school district has a rule that you cannot observe colleagues you taught with (either in the same building of the same department).

By having a transparent process for the peer review role, future coaches are equipped with the necessary skills to understand the application process. Peer reviewers play a unique role in teacher development: According to one interview source, administrators may not be as extensively trained as coaches, so they may not provide as much helpful feedback. Additionally, training peer coaches to give constructive feedback may, according to some educators, also feel more productive than receiving feedback from administrators, which may feel punitive in nature.

By focusing on teacher growth and tailoring the reviews to a teacher's needs, the peer review role demonstrates the importance in allowing a district to identify what will work best for its schools, teachers, and students. Moreover, this type of innovation allows teachers to continue working in the classroom while also building the overall leadership capacity of the district.

Component 2. Job-Embedded Professional Development.

How Q Comp districts have chosen to implement these job-embedded professional development varies: some focus on professional learning communities, some on professional development as a response to teacher observations, and some use the professional development component of Q Comp to further district goals.

A first example of job embedded professional development through professional learning communities comes from one metro area district. Instead of creating traditional PLCs, such as grade level or content area, the district's Q Comp plan allows teachers to create their own PLCs by selecting who they wanted to work with, regardless of grade, content level, or building location. Other professional development time offered teachers opportunities to learn new things that they felt were needed to enhance their own practice, as opposed to a one size fits all district-level professional development.

Alternately, a different metro area district invested greatly in teacher observation and coaching as part of its Q Comp plan. Professional development opportunities offered are a result of teacher observations. Peer coaches come back as a wealth of knowledge that they can pass on, and now development sessions can be offered based on what coaches are seeing and what else is needed within instruction.

A third example of job embedded professional development within Q Comp, is using professional development to support specific district-wide goals or initiatives. A different metro area district used Q Comp funding to address the needs of teachers in deepening their racial consciousness. Q Comp funding supports the use of an equity coaching model and provides professional development opportunities that build teachers' capacity to engage in culturally

relevant teaching, building relationships, trauma informed and restorative practices, as well as to talk about and address systemic racism within their schools and the district.

Within each of these examples we see a common thread leading to greater buy-in and perceived success is to give teachers as much agency as possible in selecting the type of development offered, whether this is a professional learning community or other type of job-embedded professional development. Teachers know their unique contexts and needs, and are more likely to be invested in learning that they perceive aligns to their needs. Similarly, the research supports the idea that alignment matters, professional development opportunities that are aligned to other systems, such as evaluation and coaching, or district strategy such as equity, are more likely to surface outcomes for teachers (Wei et al, 2009; Hezel, 2009; Educators for Excellence, 2014).

Component 3. Teacher Development and Evaluation.

The high-level takeaway for teacher development and evaluation as it relates to Q Comp is that the component should focus on growth and accountability rather than high-stakes decisions. The extent to which the component feels like a job support instead of something punitive increases the likelihood that teachers will buy-in to the plan. In that vein, Educators for Excellence recommends using a wide variety of formal as well as informal evaluations, including several by people who are trained and paid evaluators or coaches (Borman et al, 2014). Districts that spent time intentionally training and developing coaches who give constructive feedback also expressed a wish that district administrators receive the same evaluation training. Their experience has been that if administrators could access the same training, creating common goals and language around expectations, the feedback administrators provide as a part of their evaluation would be more valuable.

There is some measure of consensus among people we spoke to that the value of the teacher evaluation component is in how it provides time and space for teachers to get constructive feedback. The specifics vary greatly. For example, in one district we surveyed teachers receive their bonus for simply completing three rounds of observations. In another, the observations were focused on teachers' own identified SMART goals, and the bonuses were tied to successfully making progress toward those goals using support from their evaluations. Some innovations of note include the "Near Peer" evaluation round mentioned earlier, where teachers choose their own peer to do their observation with support in the pre- and post-observation conferences by a coach, and the practice in another district which allows a coach to step in as a substitute so a teacher can observe another peer doing something innovative.

Component 4. Performance Pay and Reformed Salary Schedules.

Early evaluations of Q Comp's effectiveness noted that teachers are much more reluctant to accept Q Comp when they view it as a performance pay initiative as opposed to a holistic program with multiple components (Wahlstrom, 2006; Nobles, 2009). This finding suggests that

the design of the performance pay system is important to creating buy-in among teachers and successfully adopting the program. It also suggests that districts be intentional about how they communicate Q Comp plans and expectations. While performance pay is an important aspect, perhaps it should not be the focal point of Q Comp plans.

Every district must have a system of performance pay in their Q Comp plans, but they have substantial freedom to determine the amount of bonuses as well as how those bonuses will be earned. For example, the amount of money that is designated for performance pay varies wildly across districts. In a study of Q Comp effectiveness, Mykerezi et al. (2015) investigated the differences in performance pay dollars. They found that the amount of performance pay dollars allocated to teachers ranged from $3 to over $4,000. We saw similar variation among districts in the Twin Cities area. One districts, for example, has a system that allocates over $1,500 for teacher performance bonuses, while another only provides $3.

Importantly, the existing Q Comp research did not find that differences in performance pay dollars explained any of the difference in outcomes among students. This means there may not be one “best practice” for how to allocate performance pay funds. Different districts may need to use different incentives to achieve results with their teacher and student populations. Districts designing plans should consider whether larger incentives would encourage teacher growth or whether those dollars would be better spent on more teacher leaders or professional development opportunities.

There is also variation among how the performance pay bonuses are determined. Districts are required to use three measures: completion of formal classroom observations; school- or district-wide student achievement goals; and teacher-defined school- or classroom-level goals (Mykerezi et al., 2015). The Mykerezi et al. study provided a visual to help depict how districts opt to divide the bonuses, which we’ve reproduced in Figure 1 below.

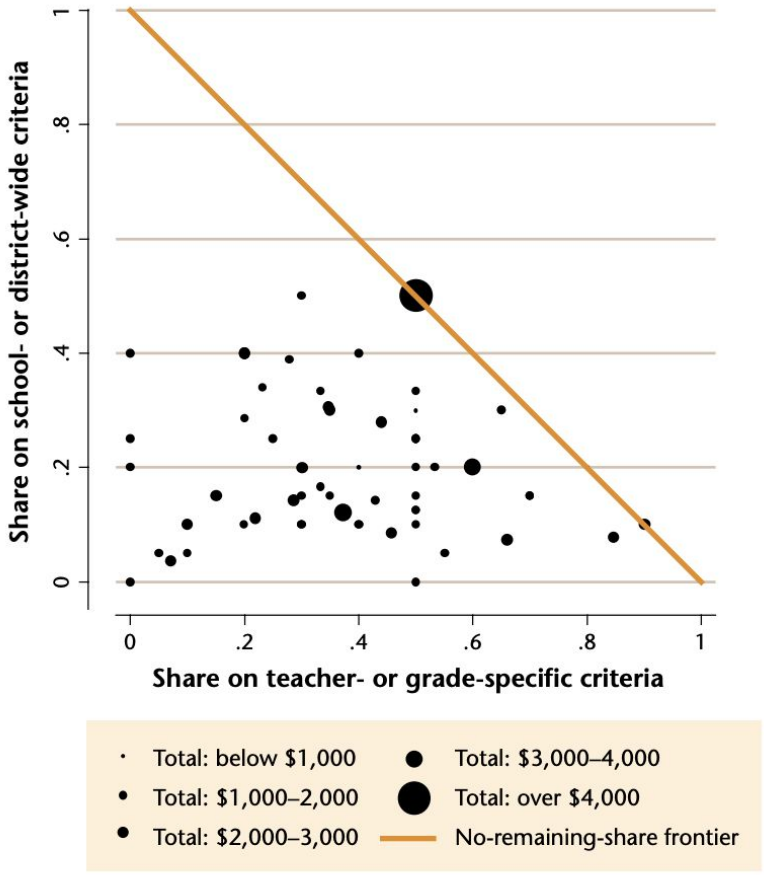

Figure 1. Variety of Pay-for-performance Bonuses Offered by Q Comp Districts (Mykerezi et al., 2015).

Each dot in Figure 1 represents a district, with the size of the dot showing how much money is allocated to performance pay per teacher. Placement along the x- and y-axes show the share of the districts' bonus that is spent on teacher or grade goals (x-axis) and school or district goals (y-axis). The distance from the orange line tells us the share designated for formal observation bonuses. As you can see, two districts (on the orange line) do not designate any funding to the observation process. While another (in the bottom left corner) designates all of its money to the observation process. Clearly districts have made different choices about what is important to them and what will drive teacher behavior.

One metro-area school district provides an example for how a performance pay system could function. Teachers in the district are awarded $1,500 each year for completing their set of three formal observations. This represents about 80% of the bonus for teachers, with the other 20% split between school-level student achievement and teacher-written goals. Teachers can earn up to $500 as well if they agree to support the observation process by acting as a "peer of choice".

This district's approach assumes that teacher performance will improve more from high-quality observations than from incentives for student achievement. This may be because it is such a large district with large schools. One interviewee suggested that teachers in big districts may have trouble seeing how shifts in their individual practices affect the overall district or school-level achievement -- there may be just too many other teachers and classrooms and students. Without feeling as though they have control over the measures, teachers may not be motivated to seek out PD or participate in coaching by the district or school-level bonuses. On the other hand, teachers in small districts or small schools may be very motivated by those bonuses because they can see the direct impact of their efforts on student achievement.

Clearly districts have some freedom in how they choose to implement performance pay. There is a tradeoff, however, between spending Q Comp funding on teacher incentives and spending it on professional development, career advancement options, and evaluation systems. Districts need to be thoughtful about how they allocate funding to performance pay as well as within performance pay to ensure that there is an appropriate balance of motivating incentives and targeted supports. It is also worth noting that we did not see or hear of any examples of districts utilizing the hard-to-staff incentives in spite of the evidence-base.

While understanding the evidence for and implementation of Q Comp is an important step towards writing a plan, Q Comp's political future must also be taken into account. Section V looks at upcoming legislation concerning Q Comp as well as some of the existing local tensions.

V. What is the political future of Q Comp in Minnesota?

Unfortunately, the Minnesota Legislature has not approved Q Comp for increased funding since the 2016-2017 school year. This funding cap has created problems with providing the promised per-student funds to existing Q Comp districts. For fiscal year 2017, the most recent accepted budget biennium, the total dollar amount allocated for all Q Comp plans across the state was just over $88 million (MDE, 2018). Due to increasing enrollments, per-student rates have had to be prorated to account for the stagnant funding, and no new districts have been accepted to participate. Although Q Comp's funding future is unclear, MDE still encourages districts to apply for spaces on a waitlist.

SF 1820/HF1633. At the time of writing, the Minnesota Legislature is considering modifications to the Q Comp bill to address those funding issues. In its current form, the legislation proposes to increase the funding cap, and eliminate the wait list by funding all districts with currently accepted plans. The Senate version of the bill has bipartisan sponsors, though the House sponsors are only members of the DFL. While it remains unlikely the provisions will make it into the omnibus bill this year, especially after the decreased budget forecast and subsequent reductions in spending targets, there could be potential next year when the Legislature is not passing a full budget. The political reality is that it is much more popular (and easier) to add than

to subtract, so while Republicans speak to frustration about not seeing plans that truly pay for performance, and Democrats have their own reservations, history suggests it is unlikely the Legislature would abandon Q Comp altogether.

Local political tactics. Multiple districts across Minnesota required several attempts before creating a Q Comp plan that their local teachers union would support. We were able to speak with people associated with a few such districts, and each provided similar feedback: Give teachers agency in writing a plan that meets their specific needs, and engage with union leadership early and often. Interestingly, the economists we contacted agreed. There is no one perfect Q Comp plan, and there is no one component that is more critical or more beneficial than any other. Building on those perspectives, districts have nothing to gain from top-down plan development and everything to gain from robust teacher engagement from the ground up. Plans that are built around teacher voice are tailored to the needs of the local schools and garner the highest level of buy-in at the staff level. This model for plan creation and adoption appears to be successful because it provides alignment between incentives, direction, and space. Teachers need to be given time to do the extra work and incentives that help give that time a similar direction. In the end, districts should work with teacher representatives to write a plan that focuses on accountability over evaluation, and that places emphasis (and therefore funding) on the areas most important to the professionals working in the local community. That will look different in every community, because no district shares exact circumstances.

VI. Conclusion & Recommendations

In this paper, we sought to highlight the effectiveness of Q Comp by looking at the four individual components, as well as identifying its impact on students and teachers. The literature review focuses on evidence-based research around each component and what is known about Q Comp in Minnesota. In an effort to more deeply understand Q Comp at each level, we conducted interviews with people ranging from metro-area schools to the Minnesota Department of Education. As a result of the research and interviews, we have identified five different recommendations that are intended to aid districts in planning and implementing Q Comp.

Recommendations for Q Comp Planning & Implementation

Start the process by getting on the waiting list now.

- SF1820/HF1633 would eliminate the waiting list, allowing all schools with approved plans into the program. While it may not make this year's budget, it's a bipartisan bill that could gain traction next session.
- An approved plan that aligns with TD&E goals will allocate extra dollars for teacher pay and professional development.

Teachers take the lead in writing the plan.

- Increases buy-in for teachers and paraprofessionals.
- Increases the likelihood that there will be differentiation between schools to meet teachers' specific needs in a given school context.
- Economists find no differences in benefit based on program design, and speculate that some of the effect is from aligning teachers in a common direction.
- Include the teachers' unions in the Q Comp development process.
- Include non-teacher staff goals (counselors, SLPs, etc.).

Think about needs and professional development locally.

- Teams should be small enough to have shared goals and needs.
- Small teams (subject-grade, team-grade, or subject, depending on the school) increase buy-in from staff and hold teachers more accountable for participation.
- Let schools or teams within schools define professional development needs that are aligned with central district principles or strategies.
- Identify how and what kinds of incentives will work for a specific school district.

Use opportunities for innovation, but also integrate into existing strategy.

- Identify additional areas for opportunity: For example, hard-to-staff incentives are rarely used in Minnesota's Q Comp plans regardless of its evidence base.
- Be intentional about prioritize one of the four components, as funds are still limited.
- Integrate the Q Comp plan with existing district strategy.

Be responsive and flexible about implementation.

- Listen to teachers' and coaches' feedback early on and demonstrate a willingness to make adjustments or provide additional support.
- Good Q Comp plans still require flexibility and reflection, especially in the beginning of the implementation process.
- Ensure that the incentive structure is clear and there are adequate supports to help teachers meet those goals; be quick and clear in responding to any potential confusion.
- Create buy-in by identifying and investing recognized and respected teachers in the district to help with implementation and creating buy-in; districts could also consider using these people as coaches.
- Collaborate with the Minnesota Department of Education to identify and respond to changing needs within the district.
- Q Comp requires both short- and long-term goals setting.

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