Effective Teachers and Performance Pay

A Recommendation for Mississippi's Performance Compensation System

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MISSISSIPPI STATE UNIVERSITY

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Education is foundational to the success of the individual and society. Without it, our workforce and our economy crumble, and we are ill-prepared to navigate the world around us. Early on in the home and later in the classroom, children are taught to read and communicate, to solve problems, and to integrate socially.

Learning is a lifelong process, but one of the most critical stages is the period of formal education. The classroom setting and teacher-student interaction are the bedrock of our educational system.

Because what a student takes from the classroom is so directly impacted by the teacher in that classroom, Mississippi must take seriously its duty to provide excellent teachers in its public schools. Not decent teachers or average teachers, and certainly not mediocre teachers or barely-get-by teachers. We need strong, effective teachers who can make a difference in the lives they touch.

As Governor, I am striving to push Mississippi past what is merely accepted. A teacher compensation program that pays for performance instead of simply an accumulation of years in the classroom will put us on the path to excellence and move our state forward

It does our educational system—and more importantly our students—a disservice for a dedicated, effective teacher to earn the same salary as a teacher who does the bare minimum. A pay for performance system is a way to inspire teachers to learn, grow, and improve with their students.

This report establishes a framework that will guide a series of pilot projects during the next year to lead the way for statewide adoption by 2014-2015 of a teacher compensation system that rewards effective teaching. It is a beginning point for improving education in Mississippi and for changing our students' achievements and our image from 'worst-of' examples into success stories.

Like any transition, these ideas may be met with some resistance, but I encourage administrators and teachers to face the challenge of teacher performance with courage. We must keep at the forefront our common goal: improving classroom instruction and the educational attainments of our students.

This report provides a flexible, accountable framework for doing just that, and I hope that you will join me in the endeavor to secure a brighter future for all Mississippians through the improvement of teacher performance and compensation.

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Funding for this project was provided by the **Appalachian Regional Commission (ARC)**. The ARC is a regional economic development agency that represents a partnership of federal, state, and local governments. Established by an act of Congress in 1965, ARC is composed of the governors of the 13 Appalachian states and a federal co-chair, who is appointed by the president. Local participation is provided through multi-county local development districts. Each year, ARC provides funding for several hundred projects in the Appalachian Region, in areas such as business development, education and job training, telecommunications, infrastructure, community development, housing, and transportation. These projects create thousands of new jobs, improve local water and sewer systems, increase school readiness, expand access to health care, assist local communities with strategic planning, and provide technical and managerial assistance to emerging businesses.

The **Research and Curriculum Unit (RCU)**, established in 1972, is a research center at Mississippi State University (MSU). The RCU fosters educational enhancements and innovations in K–12 and community college curricula, professional development, and assessments for teachers and students. In keeping with the land-grant mission of MSU, the RCU is dedicated to improving the quality of life for Mississippians. The RCU served as the managing organization for this project.

With more than 20,000 students from all 50 states and 72 countries, **Mississippi State University (MSU)** is Mississippi's flagship research university. It has been named a top 100 "best value" institution by Forbes magazine and a top 20 university for military personnel and veterans by the *Military Times*. Featuring the state's only College of Veterinary Medicine and School of Architecture, MSU also is one of the top research institutions in the United States, carrying the "very high research activity" classification by the Carnegie Foundation for the Advancement of Teaching.

Executive Summary

Mississippi faces a serious challenge in its classrooms: too many students fail to achieve. This is not new, nor is it unique to Mississippi. Educators across the country grapple with this same problem. Solutions share a common focus: the teacher. Educators know that *the single factor that impacts student learning most directly is effective teaching* (Wright, Horn, & Sanders, 2007). When an effective teacher is in the classroom, students learn—the crux of a simple, yet very difficult, solution.

Implicit in this solution are these questions:

1. What is "effective teaching"?
2. How do we know students are learning?

Fueled by federal Race to the Top and Teacher Incentive Fund (TIF) grants, educators across the country are aggressively answering these questions as they create, sometimes invent, new processes that will ensure that every student is taught by an effective teacher in every classroom.

Mississippi is following suit. The new teacher appraisal process clearly identifies and defines competencies that combine for effective teaching, competencies which Mississippi now requires teachers to demonstrate. Throughout the school year, principals will appraise every teacher's demonstrated level of mastery of each required competency. Weak areas will be noted, action plans structured, and progress reappraised. No teacher is left behind, no competency overlooked.

On the surface, the second question seems straightforward. The answer, however, brings accountability for results clearly into view. Measuring student achievement, by definition, measures the teacher's success. This sensitive and controversial issue for teachers calls for special attention and planning. Among the many actions educators are using in comprehensive planning is ***performance-based compensation (PBC)***, a long-standing, successful business practice that links employee accountabilities for performance with rewards for success. Encouraging teacher accountability and providing compensation to support it, Race to the Top and TIF grants require PBC systems in funded programs.

Again, Mississippi is no exception. Mississippi's TIF grant has funded the development of a full range of teacher incentives, including a PBC system. This work offers a design and implementation plan for a uniquely-tailored PBC system for the state.

After examining PBC systems for teachers under development in many states, reviewing their commonalities and reported challenges, the researchers of this system sought to design a PBC system for Mississippi that (a) complements work addressing teacher competencies already in progress in school districts throughout the state; (b) incorporates direct input from our classroom teachers; (c) borrows recommendations from educators in other states who are well into PBC-system implementation; and (d) includes well-documented and accepted PBC design principles.

As a result, this system is structured to serve a dual purpose:

1. Reward teachers for measured effectiveness in the classroom.
2. Provide school principals with a new management tool.

As such, the design provides a means to focus teachers on reaching specific goals, namely, competency growth and student achievement, and the end reward for doing so. In addition, the design is structured to allow principals to align teacher focus with broader school goals.

From an implementation standpoint, the recommendation is to merge the compensation system into the new teacher appraisal process, complementing work already underway in Mississippi schools. The Mississippi Department of Education (MDE) central strategy is to ensure that all teachers are effective; success of this goal is crucial for more of our students to learn and achieve. However, historical student performance in our classrooms tells us that teacher competency gaps are wide. Extending the MDE's appraisal process to include PBC reinforces the competency changes required. In fact, PBC provides a financial stake in teachers' efforts to become effective teachers, giving financial incentives to improve both their competencies and their students' performance.

Recommendations

Recommendations relating to this PBC system fall into five categories:

1. Structure
2. Organization Alignment Design
3. Implementation
4. Payouts
5. Mitigating Risks

PBC Structure

Like other PBC systems in development, this system's structure has two parts: (a) a qualitative measure of teaching effectiveness and (b) a quantitative measure of student performance. The recommended system will

1. Use the Mississippi Statewide Teacher appraisal rubric (M-STAR) as the qualitative measure. Building on this process reinforces M-STAR goals and financially motivates teachers to build competencies. M-STAR is researched and brings accepted best teaching practices to the classroom; there is no reason to invent another qualitative measure.
2. Base the student achievement measure on a value-added algorithm, when it is finalized and tested, that statistically merges state-wide test scores with factors outside teacher control that impact student achievement (e.g., attendance, classroom size, socio-economic home factors, etc.). A value-added algorithm is being developed as part of the Mississippi TIF grant. Note: Mississippi's in-progress transition to the Common Core State Standards, a more rigorous education curriculum, means that state-wide tests, an important variable in the value-added algorithm, will change, creating a new base line for student achievement. This delay is accounted for and incorporated into the implementation strategy of this system.
3. Use test results from universal screeners for grades K–2 to measure student performance. Select one universal screener for all schools in the state.
4. Allow for the division of the quantitative measure into two parts:
    a. Student performance or value-added measure;
    b. School-wide goals (e.g., graduation rates, percentage of students in middle and elementary school scoring proficient in reading and/or math).

5. Use school-wide goals as the quantitative measure for teachers in grades 3-12 who do not teach courses associated with the Common Core State Standards (CCSS) tests.

PBC Organization Alignment

Knowing where and how to embed PBC in the organization is vital for success. Long-standing principles underpinning PBC served as a guide for this recommended system. Effective PBC systems communicate and reinforce the organization's strategy or goals:

1. A direct line of sight to the organization's goals is the first consideration.
2. Reward weights are a function of the importance of the performance component to the organization's success.

Following these principles, this PBC system for teachers aligns with the Mississippi Department of Education's (MDE's) teacher effectiveness strategy and the new teacher appraisal process. The 2014-completed transition to the CCSS, a much more rigorous and demanding classroom curriculum, adds pressure on the MDE for successfully improving teacher effectiveness as quickly, effectively, and efficiently as possible. Assigning 100% of PBC payout to competency growth communicates and reinforces that focus by:

1. Formally merging PBC with the teacher appraisal process or extending the process to include compensation for competency growth targeted by the appraisal process.
2. Assigning 100% of the reward weight to competency growth (qualitative measures) in the short/near term. This weighting will be maintained until Mississippi can verify that schools are nearing the goal for every student to be taught by an effective teacher in every classroom.

As stated, increasing student performance depends upon placing effective teachers in every classroom. These two PBC system recommendations maintain teachers' direct lines of sight on filling their own skill gaps in the short/near term such that more students will be able to increase their performance in the long term.

PBC Design

Organizations concerned with PBC systems for teachers, such as the North Carolina Center for Teaching Quality (2011), emphasize that one-size-fits-all plans do not work. This system takes this caveat to the heart of its design, building in flexibility that provides for individual teacher and individual school PBC system applications by

1. Providing principals with a means to focus a teacher on particular teaching weaknesses identified in the appraisal process; shifting compensation rewards from strong to weak competencies; and individualizing PBC accordingly.
2. On a more strategic level, providing principals with a means to direct teacher focus on a school-wide challenge by changing the qualitative and quantitative PBC reward weights. Beginning with teacher effectiveness rated 100%, later adding weight to student performance outcomes and changing these weights over time given specific school needs, a principal can use PBC to reinforce teacher line of sight on school challenges.

Implementation

The implementation recommendation is in two steps:

1. Implement PBC with the teacher appraisal process; begin in schools where the process is in place, training has occurred, and funds are available. In addition,
   a. Maintain teacher line of sight on filling critical skill gaps.
   b. Add student performance measure once teaching competencies grow and CCSS is embedded into classrooms.
2. Delay implementing the quantitative measure (student performance) for CCSS-tested area teachers until
   a. There is measured teacher competency growth;
   b. The value-added measure is ready for use; and
   c. Students complete one or two rounds of CCSS tests, creating the new baseline for student achievement measures.

PBC Payouts

This system incorporates two additional PBC principals guiding PBC payouts:

1. Only exceptional results should be rewarded.
2. Rewards need to be meaningful.

In other words, pay PBC only for top performance in order to distinguish those who contribute significantly to organizational success. Historically, Mississippi teachers have received automatic raises from two sources: incremental raises provided by the state legislature and local supplements from the districts. All teachers receive these awards based on formulae tied to teaching longevity, teaching credentials, and district budgets. There are no adjustments for either teaching effectiveness or student performance. The recommendation for this system includes introducing both of these factors into the compensation equation:

1. Replace across-the-board local supplements with performance-based pay for exceptional teachers in the near term and for exceptional teachers and targeted gains in student performance in the longer term.
2. Engage PBC experts to develop ***meaningful*** payout amounts. This teacher compensation change is one of the loudest communications and strongest reinforcements of teachers' direct lines of sight to the MDE's goal to increase teaching effectiveness.

Mitigating Risks

The following summarize and highlight other recommendations detailed in the report:

1. Ensure ***support from the top*** for implementing PBC.
2. Appoint a PBC manager/champion who understands how to embed a new process into an organization; this background trumps in-depth knowledge of education. Plan the implementation thoroughly. Lessons learned from Tennessee indicate that weak implementation causes expensive setbacks. In fact, it may take six months or longer to lay the foundation for implementing PBC.
3. Change student grading policy to count the CCSS assessment score as a major test grade, thereby impacting student report card grades. This creates a stake in the results for students.

Introduction

Far too many Mississippi children fail in the classroom. Too many elementary school children cannot read on grade level and make no improvement through middle school. Not surprisingly, far too many high school students drop out of school or fail to graduate.

The evidence is striking. Almost half of third graders *consistently* cannot read on grade level and even more are falling behind by the 8th grade. Mississippi has accepted this failure so long that it is widely believed that the State Board of Corrections uses fourth grade student reading levels as a reliable predictor of future prison populations.

This unacceptable trend continues, as recent test data confirms that students are not reading at grade level (Mississippi Department of Education, Office of Research and Statistics, 2012):

Academic Year: MCT2 Minimal /Basic Language Arts Scores	3rd Graders	4th Graders	8th Graders
2010-2011	47.4%	45.7%	49.5%
2009-2010	49.8%	47.0%	50.6%
2008-2009	52.5%	47.8%	51.7%
2007-2008	48.2%	50.5%	55.8%

It is, therefore, not surprising that Mississippi schools struggle to maintain a 70% graduation rate. The rate actually dropped from 2010 to 2011 (Mississippi Department of Education, Office of Research and Statistics, 2012).

These failures almost always mean that students who drop out of school or fail to graduate face difficult challenges competing for jobs, and many wind up unemployed. Mississippi's 9% unemployment rate reported in March 2012 is one of the highest in the country; only four states' rates are higher (U.S. Department of Labor, Bureau of Labor Statistics, 2012). As a result, legislators face significant budget burdens supporting related costs, such as growing Medicaid enrollments, expanding workforce programs, and adding more prison beds. Each year, the state legislature justifiably complains about the growing costs to manage these "big-ticket" items——all directly related to our failure to educate our children (Dillon, 2008). Then legislators turn around and trim, sometimes cut, education

funding. Has the direct relationship between education and economic growth been lost?

> On average, a high school graduate in Mississippi earns $6,316 more each year than a high school dropout. Roughly 16,100 students in Mississippi did not graduate from high school in 2011; the lost lifetime earnings for that class of dropouts alone total $1.6 billion (Alliance for Excellent Education, 2012).

Mississippi is not alone in this crisis. With our nation ranking 13th among industrialized nations in college education graduation rates, every state faces serious education challenges. Over the last decades, while our country and state have been busy with other priorities, they have ignored or missed the compounding evidence that proves failure to educate our children.

This failure contributes heavily to the United States' increasing inability to compete successfully in world markets (Liepmann, 2010). Introducing aggressive new funds to transform education, President Obama announced a new education priority:

> A world-class education is the single most important factor in determining not just whether our kids can compete for the best jobs but whether America can out-compete countries around the world…. That's why we're working together to put an outstanding education within reach of every child (The White House, U.S. Department of Education, 2012).

This new priority brings accountability for student performance squarely into the spotlight. Washington took a big step forward with No Child Left Behind (NCLB), tying annual yearly performance measures to federal dollars. While arguably not the most effective legislation, NCLB imposed accountability for student results. New federal grants motivate states to build education systems that *teach* children—and to quantitatively prove they do so. These grants insist on two features: (a) new ways to define and measure "effective" teaching, laying the foundation to remove ineffective teachers from classrooms, and (b) new compensation systems that reward teachers for their *performance.*

Teachers are now front and center. Educators confirm that *the single factor that impacts student learning most directly is effective teaching* (Wright, Horn, & Sanders, 1997). Put an effective teacher in the classroom and students learn.

Like most states, Mississippi has moved into action. The new teacher appraisal process introduces a way to define and measure teacher effectiveness. The process raises professional standards for classroom teachers, requiring specific competencies demonstrated at specific levels of mastery, and measures teachers' performance against these standards. Built from the understanding that a teacher can be highly qualified yet not effective, the appraisal deliberately focuses on ***effective***, not ***highly qualified***. Thus, while teaching credentials still qualify a teacher to enter the classroom, effective teaching is the requirement to remain in the classroom.

The new appraisal process is thorough and methodical. Principals assess teachers on clearly identified and defined competencies—the competencies of an effective teacher—and measure *demonstrated* competency levels. Specific professional development supports competency growth, providing the means for teachers to fill critical skill gaps. Repeated appraisals track progress.

These track records follow teachers throughout their teaching careers. They give administrators important new data for contract renewal and new-contract conversations with teachers who move between districts. Effective teachers remain; ineffective teachers disqualify themselves from teaching in any Mississippi classroom. This new appraisal sets in motion a process designed to ensure that every student is taught by an effective teacher in every grade and in every classroom.

The new teacher appraisal process is a significant and important step in reversing student failure trends.

These new federal grants also require the implementation of a compensation system for teachers that pays for performance, i.e., *PBC*. Acknowledging long-standing PBC success in business, Washington adds a carrot to the stick: generate results, receive rewards; no results, no rewards. To this end, dozens of new PBC systems are cropping up. Mississippi is in the game: with TIF grant funds, another PBC system for teachers is almost complete.

The PBC system described here offers a unique approach to PBC system design, one that positions PBC as a *means*, or a tool, for generating results and, as the *end*, the reward for achieving them. Although standard PBC applications for teachers abound, this PBC system is intended to be different. At the very least, the design is intended to prompt the reader to direct innovative, creative, even bold consideration to PBC as a powerful tool to reinforce critical change—and to insist that Mississippi's PBC system embrace PBC best practices confirmed in other industries.

Methods of Data Collection

The PBC system recommended here is based on both primary and secondary research. Focus groups in three high schools gathered classroom teachers' input regarding a PBC system for Mississippi schools. In these groups, practitioners' reactions and concerns were specifically sought out and analyzed. The group participants were asked to expand and describe potential impacts of existing school culture on PBC. Ultimately, this bottom-up approach garnered perspective of real and practical aspects of classroom environments that impact teaching performance.

Teacher evaluation and examples of teacher competencies in the new evaluation process targets were explored and examined. The authors of this report explored current measures of student achievement, those that might be used in a PBC, and the pros and cons of each. The authors asked for ways to include teachers in non-state-tested areas in a PBC system tied to student achievement.

Participants completed a Web-based survey that explored their views on motivating students, factors that drive or impede student achievement, which ones they control, those they do not, the availability of district resources to support more effective teaching, and ways that districts help or hinder teacher effectiveness.

In addition, the authors interviewed developers and managers of the Tennessee PBC system now being implemented but reworked, asking about lessons learned, success factors, and major challenges. An interview with Dr. James Hutto and Mr. Scott Lewis, consultants managing Mississippi's TIF grant, was conducted, and their experience in developing different teacher incentive programs, including another well-documented PBC system for Mississippi, was added to this report.

Secondary research explored key components of emerging PBC systems for teachers and identified related support and criticism. Researchers of this report tracked major studies that are assessing existing PBC systems and searched for documented best practices and impacts on student achievement. Additionally, researchers studied issues related to motivating students in school environments and how student *achievement* and *performance* are differentiated. Finally, the fundamentals of PBC systems that have been operating successfully in business environments for decades were reviewed and summarized.

Participants

Three high schools located in the ARC region participated in this study. Each school administrator was asked to identify 10 teachers to participate in the electronic survey and focus group interview. Participants represented tested and non-tested subject area disciplines. Additionally, participants' years of experience, gender, and racial background were representative of their respective schools' teaching population.

Report Scope

This system is based on the assumption that Mississippi will implement some kind of PBC system for its teachers in the near future. Therefore, strategic arguments to implement PBC are minimal. Instead, emphasis here is placed on a particular system's *structure* and its *implementation plan* that is intentionally designed to ground and reinforce two important MDE initiatives:

1. The well-defined and disciplined teacher evaluation process targeting increased and measured performance of specific teaching competencies that are known to increase student achievement.
2. The complete transition of the classroom curriculum to nationally based CCSS, providing a broader, more rigorous course of study for our students.

Similar to the TIF recommendation, this report focuses on PBC for *teachers;* administrators are not included. This report neither repeats nor appraises the Mississippi TIF recommendations. Given the endorsements of the TIF work, the kinds and degrees of educators, and the expert input into developing recommendations, the authors assume that their report provides Mississippi an educator-supported, well-documented, thoroughly researched system of incentives for teachers. This report focuses only on performance-based pay for teachers.

New PBC systems for teachers are, in truth, too young to provide empirical data that *proves* PBC systems result in *sustained* growth in student performance.

Fact #1: Student achievement does increase when PBC systems are implemented.

Fact #2: *Sustained* achievement is not yet documented.

Is this because teacher PBC systems are too new to yield data sufficient to satisfy independent researchers that PBC systems indeed result in sustained student growth, or that best practices have not yet evolved? Probably both. But this does *not* mean there is little to learn from studying systems in progress, nor does it imply that PBC systems should not be used. It simply means that a definitive system has not emerged: there is room for new approaches to be tested as educators seek an optimum mix of results and rewards. In time, a best practice will evolve, most likely a hybrid of PBC system features that drive sustained student achievement.

This system described in this report borrows fundamental success factors from proven PBC systems in other industries, adds experience of those developing PBC systems for teachers, and links PBC-system objectives to current MDE strategies. Said another way, this system design is expanded beyond a compensation approach; it is *intentionally structured* to align PBC objectives with those of the teacher evaluation process now rolling into districts. Flexible in its design, this PBC system becomes a tool for principals to drive teacher-effectiveness growth—growth necessary for schools to be prepared for the challenges of CCSS.

This report also describes an implementation plan and sequence that illustrates a way to manage the triple integration of teacher appraisals, PBC, and the CCSS. Challenges, risks, governance, and funding related to this PBC system will also be addressed.

In this work, the researchers intentionally investigated different approaches in order to incorporate adaptable options in this PBC system. The report illustrates a practitioner's approach to PBC that deliberately ties compensation design to organization strategy, a best practice in business organizations. It will add to works in progress to create an effective PBC system for Mississippi teachers.

Limitations

There are some limitations to this report, both in its creation and its use. By design, the timetable and resources available to develop this system alternative were limited. The state-of-the-art for modern PBC systems for teachers is still evolving. Therefore, this system includes extractions from programs in progress and extrapolations from experiences shared by educators rolling out PBC systems. Admittedly, the system also draws from one researcher's long tenure working with employee-based compensation systems in business.

Early on, researchers planned to develop a completely *different kind* of PBC system, one that actually changes the teacher compensation process completely. After learning more about legislative control over salary increments and how they are managed, that work was abandoned for expediency's sake.

PBC Systems: Challenges

Forewarned is forearmed. What are the challenges to a PBC system's success?

To answer this question, the authors reviewed two practical and valuable sources. First is a top-down view seen through the eyes of early adopters who stepped out first, stumbled, and regrouped, sometimes two or three times. They still face challenges that continue to demand significant time and resources; these are identified. The second is the bottom-up perspective of classroom teachers whose collective wisdom anticipated opportunities and barriers to a successful PBC system in their schools—foresight. To this, secondary research was added to expand and verify.

Challenges Reported from the Top Down

The PBC systems reviewed are part of TIF or the aggressive Race to the Top programs. While each has unique circumstances causing some disappointing results, there are four common failures or shortcomings that early adopters report (Eckert, 2010). Research into a comprehensive PBC system in Australia validated these same challenges (Education Services Australia, 2011; National Institute for Excellence in Teaching, 2007).

Sustained Growth in Student Performance

Most PBC systems for teachers have **failed empirically to demonstrate sustained growth in student performance.** One PBC system awarded up to $15,000, and student performance improved for that teacher that year; however, in subsequent years, the same students' performance lost some of the gain. Fundamentally, educators blame this decrease on the lack of competent teachers sustained on their faculty: when students move from an ***effective*** to a ***less-effective*** teacher, their performance declines. PBC alone will not sustain student achievement; ensuring an effective teacher in every classroom will sustain achievement (Springer, 2010).

Teacher Performance Expectations

A second challenge is the **lack of clear descriptions of teacher performance expectations** necessary to determine eligibility for performance compensation. What performance? What kind of expectation? Answers lead to the fundamental challenge to identify teaching attributes necessary for student achievement. These teaching attributes have been bundled into the phrase ***effective teaching*** (Strauss, 2011; Springer, 2010).

What is effective teaching? Multiple privately and publically funded studies across our nation and even in our state focus on the answer. In the introduction to the Bill and Melinda Gates Foundation study to quantify measures of effective teaching, the authors read:

> Despite 40 years of research pointing to huge differences in student achievement gains across teachers, most school districts and state governments cannot pinpoint what makes a teacher effective (Kane, 2009).

Without exception, the authors' research into PBC program shortfalls cites vague and incomplete descriptions of expected teaching performance. The absence of a *definitive* list of effective teaching attributes, however, has not stopped PBC program development, nor should it. There is significant opportunity for improvement in effective teaching by focusing on growth in the widely accepted teaching competencies. The challenge is not the inclusiveness of teaching attributes but in how these attributes are described. Successful PBC systems depend on specific descriptions of performance expectation. This specificity challenges existing programs.

Quantifying Student Achievement

Another major challenge to PBC system implementation is the **challenge to quantify student achievement** in a way that account for documented impacts on student performance. The difficulty arises in that, as the teachers in each of our focus groups confirmed, there are several factors that are outside of their control but still substantially impact student achievement, e.g., parental support and socioeconomic factors of families. Accordingly, it is not easy to construct a statistically valid and reliable assessment, one that is criterion referenced, straightforward, *and* includes variables known to materially impact achievement but which are inherently difficult to measure (Potemski, 2011).

In acknowledgement of this assessment challenge, those designing PBC for educators, TIF, and Race to the Top grantees are all working to create ways to measure student achievement that include these kinds of factors. To this end, PBC leaders are turning to sophisticated statistical algorithms (McRel, 2009; Troen, 2006).

While this approach is now being used by most PBC system designers, it raises a parallel challenge in *how the new measure is used*. Statisticians address the reliability of algorithm outcomes when mathematical estimates are used to represent, for example, socioeconomic factors and parental support. Statistical models depend on precise, fixed variables, but the situational variables representing outside factors affecting student performance are dynamic: social-economic conditions improve or decline, e.g., divorce changes the home environment. Likewise, classroom environments and teachers change. Statisticians warn that building statistical algorithms to assess student achievement might result in a more comprehensive measurement, but interpreting the measures will be inherently more complicated due to these fluctuating factors. Thus, statistical measurements cannot be viewed in isolation (Wright, Horn, & Sanders, 1997).

Planning and Execution

Another common PBC system shortfall is linked to **poor implementation planning and execution.** Implementation breakdowns include missing or inadequate actions to garner local stakeholder support, e.g., community leaders, PTO members, district/school administration, and classroom teachers, and inadequate documentation of plan expectations that leave district staff and teachers confused and frustrated. Complete communication plans are needed to update and inform results in misunderstandings. Otherwise, these misunderstandings lead to missteps that require time-consuming revised implementation strategies. Some implementation plans include ill-defined and inadequate feedback mechanisms to facilitate efficient problem-solving (Shakman, Riordan, Sanchez, Cook, Fournier, & Brett, 2012; Perry & Engbers, 2009; Troen, 2006).

Tennessee shared challenges managing different opinions of key stakeholders, e.g., community leaders in its metropolitan areas, district superintendents, and state department managers. Developing thorough communication plans that districts could follow was difficult. Tennessee emphasized that getting the implementation right has been as important as getting the process itself right.

To summarize, ensuring every teacher is ***effective*** to sustain student growth, clarifying expectations for teachers, building an appropriate quantitative measure of student achievement, and developing comprehensive implementation plans and managing them continue to challenge PBC systems—and define threshold challenges for a new system.

Foresight: Challenges Reported from the Bottom Up

Secondary research and focus group participants confirm that classroom teachers welcome rigorous evaluation, even evaluation that ties to their compensation (Paulson, 2012). Focus group teachers enthusiastically supported the idea of performance-based pay. Appropriately, they see regular evaluations as a means to improve their teaching methods and skills, and they assume that strengths will be recognized and weaknesses addressed through professional development and corrective action plans. Most teachers want to be effective.

In discussion with teachers regarding PBC systems, their primary challenges addressed student achievement measurements. They acknowledged that the Mississippi Curriculum Test (MCT2) and subject area tests results are the most obvious measure: they are valid, standardized, administered in a controlled environment, and criterion referenced. However, teachers shared experience and observations that question state testing as the primary measure of student achievement.

Students' Stake in Test Outcomes

Teachers observed that students in grades 3-8 have **little or no stake in the test outcome**. As one participant stated,

> "Why should students take the test seriously? They pointed out that state test scores do not impact report card grades, the measure students guard the most carefully."

Further investigation revealed that almost 50% of all students at a middle school in rural Mississippi scored at least two grades below grade level on standardized test scores for reading (although not MCT2 scores) in 2009. However, over 90% of the 8th graders were promoted to high school, indicating a satisfactory classroom achievement level. What, then, did the standardized test actually measure?

In addition, teachers in the focus groups pointed out that lower-grade students experience no serious consequences for low scores on a state test. While the original intent was to retain students scoring minimally on the state tests in the critical testing grades, 3rd and 8th, these students are too often promoted to the next grade.

Student Achievement vs. Test Performance

Teachers emphasized **the difference in student achievement and test performance.** Focus group members defined a*chievement* as what a student has learned during a period of time; *performance,* on the other hand, they described as a function of how a student chooses to demonstrate learning on a particular test at a particular time. Motivation to achieve, they continued, is not the same as motivation to perform. With no real stake in state test outcomes, they question student motivation to perform at best levels.

Tennessee created stakes in state-wide tests by requiring they be counted as a major test for the 9-week grade, an easy solution to a difficult problem.

Work Environment

Another challenge relates to **work environment factors** that hamper teaching effectiveness. As confirmed in both primary and secondary research, most teachers are motivated to teach effectively. Teachers shared that as tight budgets increase student-teacher ratios, limit teacher planning and collaboration time, and make remediation resources and materials scarce, motivation is spread thin. Some teachers reported having only 15-min lunch breaks and only one planning period a week. Others teach three or four different subjects and lead school activities. Teachers also reported difficulty accessing student longitudinal performance data, leaving them without important information about students and further hampering teacher effectiveness.

Uncontrollable Factors

Teachers also highlighted important **factors outside of their control** that directly impact student achievement, such as parental support, which they cited as the most important variable in student achievement growth. Another significant factor was attendance. Multiple focus group participants said, “Students cannot learn if they are not in school.” Other factors they named included the student’s past achievement, home and community socioeconomic factors, students becoming parents, and work responsibilities for many students to help support their families.

In summary, teachers are eager for more critical, rigorous evaluation, and they support PBC. They welcome more thorough evaluation, feedback, and professional development. Their concerns align with lessons learned by early adopters of PBC systems: getting the student achievement measurement right is critical—and difficult.

Recommended PBC System

Long-standing, effective PBC systems in other industries share a common, fundamental purpose: communicate and reinforce the strategy of the organization and align employee goals with it. Creating a direct line of sight to the organization's strategy, PBC design strengthens the employee's link to organization success. This PBC system for teachers is built with this purpose clearly in mind.

Student achievement is directly related to teaching: *the single factor that impacts student learning most directly is effective teaching* (Wright, Horn, & Sanders, 1997). The MDE new teacher-appraisal process targets this factor: through this process, principals lead teachers to develop effective teaching competencies; through PBC, their success is rewarded.

Following effective PBC strategy, the recommendation presented in this report is to *merge* PBC into the teacher appraisal process, in effect extending the appraisal process to include PBC. It is not implemented as a separate system; rather, PBC combines with and joins teacher appraisal. As districts implement teacher appraisal, adding PBC is a logical, natural step. Appraisals are reinforced as resulting scores become the basis for payouts. Action plans to grow competencies are reinforced by rewards for completing those action plans.

Merging PBC into teacher appraisals can serve to emphasize the urgency for competency growth. "These are the competencies you must improve," the principal instructs, "and here is the reward for measured improvement."

There is no time to waste, no laurels on which to rest. Looming large is the completed transition to CCSS for classroom curriculum. The CCSS "are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers" (Common Core State Standards Initiative, 2011). These national standards bring broader, more rigorous learning requirements that *demand* effective teachers for students to make this transition *successfully.* CCSS will be in place in all classrooms by 2014—in 2 years.

If history is a predictor, these more demanding curriculum standards will materially impact student achievement. In the school year 2007-2008 when Mississippi kept the same course of study but increased the rigor of its state assessments, student scores dropped significantly (Figure 1).

Table 1: Students Passing Subject Area Tests

Subject	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
English II	78.1%	77.2%	69.7%	69.0%	68.0%	71.8%
Algebra	91.0%	90.8%	71.0%	72.0%	79.6%	85.4%
Biology	93.3%	92.2%	87.9%	87.6%	86.2%	73.0%

Essentially, the same teachers teaching in 2006/2007 were teaching in 2007/2008 when the achievement rates dropped. What the numbers indicate, then, is that too many teacher competencies fell short when a more rigorous assessment of student achievement was used. Consequently, student achievement measurably suffered. Even after 4 years, student achievement has not recovered, nor does it appear that teaching competencies have improved.

This kind of decline is predicable in the CCSS classroom *unless* teacher effectiveness increases, and does so significantly and quickly. Merging the PBC system into the teacher appraisal process adds valuable impetus for teachers to increase their teaching effectiveness significantly and quickly.

Will merging PBC with teacher appraisal motivate more teachers to grow more competencies in less time? Yes. Is there enough time for all teachers to prepare themselves for teaching CCSS successfully? Probably not in the 2 years when the CCSS is implemented into all classrooms. The high probability is that CCSS will negatively impact student achievement, but students will recover more quickly with more competent teachers in the queue. Extending teacher appraisal with a PBC system can help keep the queue full.

The teacher evaluation process begins reforming teacher effectiveness. The CCSS introduces a more difficult curriculum that requires effective teachers for student success. Hence, these two changes are inextricably linked: failure in the first means student failure in the second. PBC is positioned to reinforce and support the teacher evaluation process, providing new fuel to this vital teacher competency growth engine.

The recommended PBC system design has yet another purpose: It provides principals a way to direct individual teachers' attention to their individual weaknesses, potentially creating an individualized PBC for every teacher.

PBC System Components

Most PBC systems for teachers have two components: (a) a qualitative measure of teacher effectiveness and (b) a quantitative measure of student achievement. This PBC system recommendation follows this model.

Let us first examine these two components then move to demonstrate ways the evaluation administrators and the principals can combine these components to reinforce *individual* action plans for teachers to address their *individual* teaching weaknesses and reward *individual* growth with PBC.

Qualitative Measure: Teacher Effectiveness

It bears repeating that educators agree that the single most important factor affecting student learning is the teacher. If Mississippi is to increase student learning, then it follows that teaching competencies are crucial. The new appraisal program includes specific, clearly described teaching competencies and performance expectations. Teachers will understand both the competencies and the level of mastery required and be evaluated on both. The evaluation process extends into specific, individual action planning and professional development for each teacher to address individual competency weaknesses.

The new teacher assessment instrument and administration designs transfer naturally to a PBC system design. Mississippi's new assessment process resembles those used by Tennessee and Georgia to build their teacher effectiveness. Like many Race to the Top states, Tennessee and Georgia based their PBC systems' qualitative measures primarily on their teacher evaluation processes. The Georgia classroom observation process is more elaborate, involving videotaping teachers and assigning coaches. Appraisal results are transferred directly to their PBC systems for reward calculations. PBC is thereby **incorporated into the appraisal process itself**; it is not treated as a separate process. The teacher-appraisal instrument and administration designs will make this linkage seamless. Furthermore, this process linkage will sharpen teacher focus on one process with one objective (Danielson, 2011).

Mississippi's appraisal instrument is organized in five performance categories. Each category is subdivided into specific competency requirements. Excellence in each performance is the goal. Principals conduct the appraisals through

classroom observations and dialogue with teachers. Individual action plans address weaknesses. The appraisal process is designed to recur multiple times throughout the school year.

Twenty separate teaching competencies are divided among the five performance categories:

1. Planning
2. Student Assessment
3. Instruction
4. Learning Environment
5. Professional Responsibilities

The 20 competencies are clearly described at four different levels of competency. The competency levels carry a numerical score and label: distinguished = 4; effective = 3, emerging = 2, and unsatisfactory = 1. For example, one competency in the planning category focuses on the ability to develop effective lesson plans:

Table 2: Excerpt from Draft MSTAR Teacher Evaluation

Performance Category: Planning	Observed Level of Competency: **Distinguished**	Observed Level of Competency: **Effective**	Observed Level of Competency: **Emerging**	Observed Level of Competency: **Unsatisfactory**
Competency	4	3	2	1
Plans lessons that demonstrate knowledge of content and pedagogy	Lesson plans include all of the necessary content and connect it across disciplines with connections that are consistently clear, meaningful, and relevant to students' lives.	Lesson plans include nearly all of the necessary content and connect it across disciplines; however, connections are not consistently clear, meaningful or relevant to students' lives.	Lesson plans include only part of the necessary content and/or do not connect it across disciplines.	Lesson plans do not include the necessary content and do not connect it across disciplines.
Score				

The process calls for the principal to observe the teacher in the classroom at designated intervals and lengths of time. During each observation, the principal scores competencies at the mastery level demonstrated. Results are discussed with the teacher and action plans set to strengthen demonstrated weaknesses. At subsequent observations, the principal repeats this process, reviews action plan progress, and reinforces or redirects the teacher's work.

Converting the competency levels' scores into points is the basis for PBC based on this qualitative measure. In this system, the highest score is 80: 20 teaching competencies x 4 possible points for the highest level of mastery, "distinguished." The lowest score is 20: the 20 competencies x 1 for "unsatisfactory."

Table 3: Sample Evaluation

Performance Category	Observed Level of Competency: **Distinguished**	Observed Level of Competency: **Effective**	Observed Level of Competency: **Emerging**	Observed Level of Competency: **Unsatisfactory**
Planning	4	3	2	1
Plans lessons that demonstrate knowledge of content and pedagogy	Lesson plans include all of the necessary content and connect it across disciplines with connections that are consistently clear, meaningful, and relevant to students' lives.	Lesson plans include nearly all of the necessary content and connect it across disciplines; however, connections are not consistently clear, meaningful or relevant to students' lives.	Lesson plans include only part of the necessary content and/or do not connect it across disciplines.	Lesson plans do not include the necessary content and do not connect it across disciplines.
Possible Points	4	3	2	1
Score			2	

On the competency evaluation in Table 3, the teacher scored a 2, or the skill assessed as "emerging." Specific professional development would be assigned to the teacher to move the teacher to "effective." On the next appraisal, progress would be noted and scores revised according to the teacher's demonstrated growth. Teachers' scores from each assessment are then totaled and averaged at the end of the year. The average becomes the teacher's PBC qualitative measure of effectiveness (see Table 4).

Table 4: Sample Evaluation Average from MSTAR Teacher Evaluation Instrument

Teacher	*Score #1*	*Score #2*	*Score #3*	*Average*
Teacher #1	65	75	75	72
Teacher #2	60	60	68	63
Teacher #3	75	70	78	74
Teacher #4	40	35	45	40
Teacher #5	50	55	60	55

These scores translate into predetermined PBC rewards (see Table 5).

Table 5: Sample Payout Summary

Score	*Payout*
71 - 80	$Y
60 - 70	$Z
0 - 59	No payout

Rewards tie directly to teachers' competency growth, the critical success factor for increased student achievement. The payout chart illustrated in Table 5 is created by the district prior to PBC implementation and shared with teachers during the PBC implementation/orientation process. Keeping the payouts in the forefront keeps the focus on continuous professional growth.

This PBC system design includes an application that allows principals to change component weights in order to underscore the importance of a teacher strengthening ***a particularly weak competency***. Simply by borrowing points from a strong competency (effective or distinguished) and applying those points to unsatisfactory competencies, the principal reinforces the importance of work on that weakness while focusing the teacher's attention on it:

Table 6: Sample Weighted Outcomes

Performance Category	Number of Competencies	Total Possible Points	Teacher Score to Date	**Point Shifts**	New Targets
Planning	4	**16**	**14**	**-2**	**14**
Assessment	2	**8**	**6**	**-2**	**6**
Instruction	5	**20**	**8**	**+4**	**24**
Learning Environment	5	20	15		20
Professional Responsibilities	4	16	14		16
Total	20	80	57		80

As shown in Table 6, total possible points remain the same. However, with effective competencies demonstrated in Planning and Assessment, the principal borrows two points from each and adds them to specific weak competencies in Instruction, the weakest category. The teacher can earn or lose more points for strengthening this weakness. Once the Instruction competencies are ***effective***, the points revert back to their original distribution. With this design flexibility, PBC becomes an important and useful tool for principals to highlight specific gaps, target them for improvement, and shift rewards accordingly.

Raising the level of teaching effectiveness is the most direct and effective way to increase student achievement. The new appraisal process brings reform to teacher effectiveness. As an extension of this process, this PBC system not only rewards individual teacher competency growth but also gives principals a tool to highlight and target specific teacher weaknesses.

Quantitative Measure of Student Achievement

The second PBC system component is the quantitative measure of student achievement.

As previously noted, TIF and Race to the Top grants require PBC systems as part of the education program reforms in order to qualify for funding. This has given new importance to PBC systems for teachers. With different PBC systems emerging, most borrow best practices from business systems and include two basic components, i.e., a qualitative and a quantitative measure. Best practices, especially in measuring student achievement, have not been identified. The difficulty is in creating ways to incorporate explicit variables outside of teacher control into the measure. As development continues and measures are developed, tested, restructured, and tested again, a measure will emerge that

represents a ***more accurate*** measure of student achievement than the traditional year-over-year comparison of state test scores.

While a few TIF programs, such as Louisiana, continue to use state test scores, and others use universal screeners, such as Northwest Evaluation Association's MAP test, most PBC system designers have chosen to go in a different direction, investing significant dollars to develop a more nearly accurate student achievement measure. These new measures are commonly called ***value-added*** measures. In every case, state test scores are the primary endogenous variables.

Value-added measures are a calculation of student achievement that incorporate statistical representatives of student factors that are outside of the current teachers' control but which educators agree impact student achievement, such as the socioeconomic characteristics and demographics of the family, historical classroom performance, historical state test scores, attendance, and classroom size. These factors along with state test scores are combined into a statistical algorithm to calculate a surrogate for student achievement (Braun, 2005).

PBC systems researched for this report are all developing different value-added formulae. No collaboration among the developers was found, although they share a common objective: ***accounting for factors outside of the classroom confirmed to impact student achievement***. With awarded TIF funds, Mississippi is developing its own value-added measure. Recognizing the specialized skills required, states including Mississippi are employing specialized consultants/consulting firms or adding specialized staff for this specific purpose. The recommendation for this PBC system is to use the value-added model that Mississippi is already developing once it is completed and piloted.

Holding teachers accountable for student achievement is central to PBC, and as such requires a fair, quantitative measure. Value-added measures are being developed to meet this requirement.

School-Wide Quantitative Goals

In addition to individual student achievement measures, some PBC systems include a second quantitative measure, one that brings school-wide performance into the system (see Table 7).

Table 7: Examples of School-Wide Performance Goals

School	School-Wide Goal Example
High Schools	Graduation Rates
	ACT test scores (when required of all students)
	% Students passing all subject area tests
Middle Schools	% Students scoring proficient on language arts and/or math tests
	% Students reaching value-added goals (once this measure is in place)
Elementary Schools	% Students scoring proficient on reading and/or math tests
First and Second Grades (See below for discussion.)	% Student demonstrating grade-level reading and math skills as measured by standardized tests

School-wide goals and measures also serve another important function by becoming quantitative targets for non-tested subject area teachers (NTSATs). Those teaching students in elected courses, such as art, have the same responsibility for student achievement as those teaching required courses, such as math and English. A school-wide goal brings these teachers into the PBC system.

There is an important intended consequence of school-wide goals: ***these goals encourage teacher teamwork and collaboration.*** Working with math teachers, for example, the high school art teacher can integrate math calculations into art assignments, supporting algebra students who need extra support while working to meet a school-wide graduation rate goal.

School-wide goals are effective. Public Broadcasting System's *Need to Know* (Murthy & Weber, 2011), featured a Brockton, MA, school-wide literacy program that reinforced literacy skills in every class, including math, science, and gym. As a result, the literacy levels markedly improved. Because of its success, this

program was recognized as one of Harvard's Achievement Gap Initiatives. School-wide focus and collaboration among teachers were keys to this success.

Likewise, in a rural Mississippi middle school, the principal was successful moving the school from not meeting Adequate Yearly Progress (AYP) goals in 2009 to "high performance" in 2010 – 1 year. She led this giant step forward by recognizing that teachers were neither teaching nor testing at the Mississippi Curriculum Framework's required cognitive thinking or DOK levels. Students were learning what was being taught; teachers were not teaching on required DOK levels. With this school-wide focus, specific professional development, and organized collaboration teams, the faculty quickly and efficiently strengthened this teaching weakness.

An aggressive, mature PBC system variation designates the school-wide goal as the required trigger for *any* reward tied to quantitative measures. For example, if the high school fails to reach its graduation rate target, no rewards tied to quantitative goals are given, even if a teacher reaches his/her student achievement goal. For example, in a middle school when fewer than 80% of students score proficient or above on the state-wide language arts test, the school-wide goal, teachers lose any reward tied to student achievement. School-wide goals in PBC systems serve as important management tools by focusing all teachers on a school's biggest challenge.

As an aside, the practice of using organization-wide performance as a trigger for individual payouts is usual and customary in businesses. If the net earnings, for example, do not fall within a certain range, individual payouts are withheld. This aggressive application of rewards based on quantitative measures is not recommended for new PBC systems.

Quantitative Measures for 1st and 2nd Grade Teachers

Because of the significant challenge Mississippi continues to face teaching 1st and 2nd grade students to read and perform basic math and because these grades do not have associated state-wide assessments, this PBC system recommends a short-term qualitative assessment for these teachers.

The practice of most Mississippi districts to employ universal screeners in these grades offers such an assessment. While the specific tests used by districts vary, they are all standardized or given in controlled environments, criterion-referenced, etc., thus yielding valid and reliable results. Requiring districts to administer these tests at the beginning of the school year creates a base line for measuring individual student achievement. Continuing the practice of repeat testing during the year, then ensuring that all schools repeat the test again at the

end of the year, provides principals with solid, longitudinal data for quantitatively measuring teaching effectiveness for these critical grades. In addition, these on-going test results tie directly to the assessment process, reinforcing principals' focus on weak competencies verified by the interim test results.

In the short term, incorporating existing standardized universal screeners used by districts into PBC avoids delay debating the merits of different screeners and provides useful student achievement data to begin PBC. While 1st and 2nd graders' test results are impacted by the same environmental factors being incorporated into the value-added measures, the test results establish trends during the school year. Children failing to develop reading skills, for example, will continue to receive low test scores, singling them out for more attention and tying growth directly to PBC. Longer term, the PBC system leadership can work toward selecting a common assessment of 1st and 2nd graders' achievement for all districts.

Using PBC as a Strategic Tool

Organizations are built for a specific purpose: to realize the organization's vision. People are employed for the sole purpose of contributing to this purpose. Everything about the organization, its mission, goals, strategies, and structure, is aligned with the vision. Communicating and reinforcing employees' line of sight to that vision, to that purpose, keeps the organization working together. Compensation systems have the same purpose: pay people to contribute to the realization of the organization's vision.

More specifically, PBC systems, too, serve the same purpose: pay for performance that supports the vision. Effective PBC systems are designed to communicate and reinforce the organization's strategy or goals. Direct line of sight to the organization's goals is the first consideration; reward weights are a function of the importance of the performance component to the organization's success (Success Factors, 2012). This PBC system is designed with this purpose in mind.

Most PBC systems for teachers give equal weight to teaching effectiveness, the qualitative measure, and to student achievement, the quantitative measure:

Qualitative Measure	50%
Quantitative Measure	50%
Total	100%

As previously discussed, some PBC systems divide the quantitative measure between student achievement, usually given the higher percentage, and school-wide performance measures. The Algiers Charter School in New Orleans, for example, allocates 30% of the quantitative goal tor student achievement and 20% to school-wide growth (Algiers Charter School Association, 2009).

While most PBC systems include these two measures, no research was found that documented the 50/50 equal weight for the qualitative and quantitative measures as a best practice for PBC systems for teachers or in any PBC system. Although most PBC systems for teachers divide weight equally, there is not sufficient evidence to classify this as a best practice.

As mentioned, PBC principles emphasize the importance of a specific performance to the organization's success and use the degree of importance to determine reward weights. Therefore, the component weight is a function of the impact the performance has on overall success. The more important a particular performance is to success, the more weight it is given.

If, for example, a business' inventory is sluggish and inventory turns are creating balance sheet drag, the business might add reward dollars to faster inventory turns. Or, if budgets are unwieldy, reward dollars can be tied to keeping actual costs in line. Goals and related rewards change as the organization faces new challenges.

Translating this practice into PBC systems for teachers, the guide for weighing the qualitative measure (teacher evaluation results) and the quantitative measure (student performance) is the impact each has on the school's success at the time. North Carolina Center for Teaching Quality (2011) is emphatic when discussing effective PBC systems for teachers: ***"One-size-fits-all plans do not work."***

With CCSS headed full throttle into the classroom, the current challenge is growing teacher competencies, the critical success factor for students to achieve. Given this challenge and the need for more teachers with more competencies, the recommendation is that, ***when this PBC system is first introduced, 100% of the PBC be tied only to the qualitative measure, driving adoption of effective teaching competencies.*** As teaching competencies grow, the quantitative student achievement measure expands the focus to include student performance and completes the PBC system components. But until teachers have grown competencies necessary to prepare to teach the CCSS, dedicating 100% of PBC to teacher performance reiterates, reinforces, and re-emphasizes their direct line of sight to the goal.

There are also two practical reasons to initiate PBC with 100% weight on teacher appraisal results. First, the value-added measure that will calculate student achievement is not fully developed. Second, CCSS will bring new state-wide tests, creating a new baseline for tracking student achievement. Comparing student performance on MCT2 tests, regardless of the appropriateness of this measure, with performance on new CCSS tests will result in an apples-to-oranges comparison.

How can we employ the PBC line-of-sight principle in our system design to give principals a strategic tool to build student performance?

The two PBC system components, teacher evaluation and student performance results, represent the ***input*** to increased student achievement (teacher effectiveness) and the ***output*** (student performance itself). Teaching effectiveness is like a growth engine; student performance results measure the growth. If the engine is not working to specifications, work on the engine; if the engine is working but we are not traveling fast enough, focus on the engine's output. By changing the focus, the emphasis of the input and output of the organization's attention is changed.

Principals use the PBC system components to reinforce the teachers' line of sight to the specific, particular school challenge that demands attention. As school challenges change, the principal changes the weights of these components, which changes focus to the new challenges. The current need is growing teacher competencies, so more weight is given to the qualitative measure. Once the new curriculum is in place, more attention may be needed on student achievement and weight shifts to the quantitative measure. As teachers increase effectiveness and students adjust to the new CCSS, weights may balance out. If graduation rates do not increase, principals can add a school-wide goal and shift weight to refocus school-wide attention on this challenge.

Designing PBC with this kind of management flexibility means PBC becomes a valuable strategic tool, a means to the strategic end. Keeping the system simple with just two components makes this flexibility accessible. Table 7 illustrates how a principal can use PBC as a strategic tool to change the teachers' line of sight as school challenges change. As the challenges change, the PBC component reward weight changes accordingly. The PBC system is used to communicate and reinforce the school challenge; meeting this primary challenge is the new goal. The following example is not intended as a recommended plan; it serves only to illustrate how changing the component weight mix can help principals focus teachers' attention on meeting school goals and challenges.

Table 8: Using PBC as a Strategic Tool

SCHOOL CHALLENGE (GOAL)	Weight of Qualitative Measure and Reward Payout	Weight of Quantitative Measure and Reward Payout	
		School-Wide Goal	Teacher/ Student Achievement Goal
Teaching effectiveness low: Reinforce teacher competency growth.	100%		
CCSS: Year I Teaching effectiveness remains low: Reinforce teacher competency growth.	100%		
CCSS: Year 2 Students struggling with CCSS. Reinforce teacher competency growth.	40%		60%
CCSS: Year 3 Provide more support for students struggling with CCSS. Reinforce teacher competency growth.	30%		70%
CCSS: Year 4 Poor student assessment scores; students not improving.			100%
CCSS: Year 5 Student assessment scores improving but not at target goal. Graduation rates drops.		40% (Graduation Rate goal)	60%

The PBC Payout

Performance-based pay experts warn that for these systems to be effective, rewards must result in meaningful dollars; however, ***only exceptional results should be rewarded*** (Douglas, 2012). Rewards are exclusive; only exceptional performers earn them. If every teacher receives PBC, the system loses effectiveness quickly and PBC is reduced to a way for teachers to receive a few extra dollars each year for doing what they always do. Setting goals that are reachable and require top performance protects the integrity of the rewards.

Detailing payout schemes and amounts is beyond the scope of this report. Specific compensation payout planning requires human resource data, salary amounts, budget details, planning with district/school leadership, and guidance from compensation professionals. It is highly recommended that the PBC system manager consult with professionals skilled in creating reward payout schemes. Long-standing compensation practice provides appropriate and expert guidelines for objectively identifying top performance and detailing specific rewards. Collaborating with Race to the Top states will bring valuable practical advice.

Funding the PBC System

Currently, Mississippi's compensation practice only serves to perpetuate ineffective teaching. Consider an 8th grade teacher with 10 years of experience and a master's degree in teaching in District A. Year after year, half of his students continue to underachieve. He will receive a higher base pay raise than his colleague with only 5 years of experience and a BA whose students consistently achieve. Likewise, the 2nd grade teacher with a BA and 5 years' experience who cannot teach her students to read and write will receive the same pay increase as the demonstrably better teacher with the same tenure and teaching credential.

PBC is one way to begin to differentiate pay based on results. PBC is a compensation plan and, as such, is funded from compensation budgets. Because teachers' base pay increments are managed by the legislature, diverting these funds, especially in the short term, invites inevitable delays in working with Jackson—and no assurance of success. However, local districts contribute to teacher compensation with budgeted local supplements. Budgets for PBC can and *should* come from these local funds. Students in the local districts are the direct beneficiaries of the PBC system as it extends the teacher evaluation process targeted to more effective classroom teachers—and more students achieving more.

The funding recommendation for this PBC system is that districts replace their traditional, automatic pay supplements with rewards earned in the short term only by teachers who demonstrate effective teaching competencies as measured by the appraisal process. Long term, only competent, effective teachers whose students are achieving receive the full PBC reward. Teachers will earn supplemental pay based on results, not on their tenure and teaching credentials.

Admittedly, this change is a dramatic departure from current practice, but it underscores the intense change needed in our classrooms. Changing how teachers are compensated by linking measurable goals directly to pay sends a strong message to teachers that district leadership is serious about reaching its goal—increasing student achievement.

How much will this PBC system cost districts? One approach to projecting PBC budgets is to bring compensation success factors and basic forecasting techniques together. Professional compensation experts are well trained in forecasting different levels of performance for compensation purposes and should be engaged during planning and implementation.

In the first years of implementation, one would anticipate that most teachers will demonstrate average teaching competencies and only a few would be performing at the highest levels of effectiveness. A critical component of the early stages of a PBC system is to reward only those true top performers. Rewarding average performance reinforces average performance.

Basic statistics suggest that approximately 16% of a population is above average. Using this only as an example, one might anticipate that in the first year only 16 out of 100 teachers fall into the top. Whether top performers make up exactly 16% of any school's payroll is not the point; the point is that *only a small percentage of teachers are top performers* (Figlio & Lawrence, 2007).

A second PBC system success factor is to make the rewards meaningful. Payout amounts require professional compensation expertise. Payouts that are set too high in early years set precedents difficult to adjust as more and more teachers qualify. Compensation experts are aware of guidelines to protect against early PBC payout mistakes.

As teachers experience the district's serious intent to reward only top performance with meaningful rewards, as teachers take their appraisal work more seriously, as more and more teachers grow their competencies, the curve

shifts to the right and more teachers are included in the compensation. The objective is for all teachers to be highly effective.

If districts choose to continue *any* practice that rewards teachers for teaching as usual, they undermine their intent to reward only effective teachers whose students perform. Big need requires big change. The legislature could continue its base pay increments: all teachers will receive some kind of annual raise until this practice, too, can be changed. **Continuing policies that pay teachers for tenure only dilutes PBC as a reward for meeting high performance expectations and, more importantly, continues to reward ineffective teachers.**

Longer term, the number of teachers earning PBC rewards will grow beyond small percentages. The intended goal is to shift the distribution curve to the right as more and more teachers demonstrate stronger teaching competencies. When this happens, the average teacher is now highly effective and well engaged in PBC. New technologies, new teacher-student achievement models, and education breakthroughs will inevitably reshape the list of teaching competencies. When this happens, PBC will be ingrained in education culture, providing a valuable tool to reinforce new goals (Figlio & Lawrence, 2007).

Implementing PBC Systems

The recommended PBC system includes two measurement components: a qualitative measure of teacher effectiveness and the quantitative measure of student achievement. The qualitative component is rolling out. Two important elements of the quantitative measure are not ready: (a) the value-added measurement tool that will actually calculate student achievement and (b) state-wide assessment results based on the CCSS, the new student achievement baseline.

With unavailable quantitative measures and the teacher appraisal process in motion, the recommendation for implementing PBC is to launch it in two steps.

Initially, base PBC *only* on the qualitative measure, driving and reinforcing the critical teacher evaluation process. Acknowledging Mississippi's documented underachievement; extrapolating the associated, significant competency gaps of too many teachers; forecasting the highly probable, negative student achievement decline associated with the CCSS; and recognizing educators' belief that *teachers* drive student achievement, it behooves PBC planners to

focus initial implementation on reinforcing the reform in process, specifically targeting teacher competency growth, the new teacher appraisal process.

Beginning with the qualitative measure will not diminish the broader vision of PBC once quantitative measures are available. In fact, adding a quantitative PBC system measure in the short run might very well dilute the focus, energy, and mandate to improve teacher competencies, the building block for increasing student achievement. Further, quantitatively measuring student achievement without the value-added algorithm, most PBC system developers would contend, is actually not possible. Adding school-wide goals beyond graduation rates, to which elementary school and even middle school teachers may have little direct line of sight thus little buy-in, may serve only to complicate the PBC system by adding a second measure before principals learn to manage PBC *and* to utilize its flexible design.

With a short-term focus on competency growth, with CCSS in the classrooms, with at least the first round of the new state-wide assessments completed, with the value-added measure developed and piloted, and with the principal's PBC learning curve flattening, the foundation is set for the second step of this PBC system, incorporating accountabilities for results, the quantitative component.

Logistics of Implementing

As we have discussed, PBC system leaders attribute many time-consuming do-overs and setbacks because of incomplete implementation planning. This section illustrates the kinds of first actions required to drive implementation. It is not offered as a complete implementation plan. This plan necessarily requires input from the PBC system manager, MDE initiative leaders into whose programs PBC fits, as well as early-adopting district superintendents, principals, and teachers.
An implementation plan that embeds and successfully executes this kind of change will take six months or longer to develop. Time-consuming planning includes:

- Develop missing PBC system details
- Develop key relationships with MDE managers of the teacher appraisal process and the implementation of CCSS
- Develop the plan to merge PBC with the MDE teacher appraisal system
- Develop relationships with superintendents, principals, and lead teachers to identify early adopters
- Develop materials/documentation for local implementation

This PBC system is designed and positioned to support and reinforce the teacher appraisal process implementation, paving the way for the CCSS. Therefore, the first step in implementing this system is ***to ensure MDE leadership approves and supports this intent***. The MDE state superintendent *must* openly endorse and support the design and intent of this PBC system. The state superintendent also should position the PBC system manager in the MDE organization and establish/approve the major problem-solving mechanism for the PBC system manager.

Because local supplements are managed by local districts without legislative or MDE decision oversight, it is possible to implement PBC without MDE approval. However, this system aligns with the MDE teacher appraisal process. Creating this alignment without MDE approval will most likely create political hurdles and practical barriers that will hurt the intent of PBC.

While the teacher appraisal process and the CCSS rollout are already underway, the PBC system implementation will require direct interface, cooperation, and collaboration as the mechanics of blending PBC into teachers' work are developed. PBC supports the MDE initiatives; it does not drive them. There will be times, however, when some adjustments will be needed, e.g., the simple amending of the appraisal form to include the PBC scores. Bringing together the initiative leaders and the PBC system managers in an unofficial but working team builds communication and encourages teamwork.

Change-management best practice begins with identifying the person who will drive, manage, and own the PBC system implementation, the PBC system manager (champion). This person carries process development and implementation credentials. A background in education is useful to establish credibility with principals, but the implementation experience trumps education experience. As the implementation process unfolds, the champion will inevitably and quickly gain principals' respect when the principals receive the guidance, advice, and resources they need to successfully implement PBC.

The champion's initial steps include:

1. Meet with the state superintendent or designated interim to ensure support and establish kind and degree of updates.
2. Meet with the MDE teacher appraisal and CCSS initiative managers and learn these processes. Attending planning meetings, visiting sites engaged in pilots expands understanding of how these initiatives work.

3. Visit key districts and meet both superintendents and principals; share the vision; understand the roles of their boards of directors; gather input: research the environments in which the system will be in place, anticipating opportunities for success as well as identifying areas of potential resistance.
4. Detail the PBC system mechanics: work with compensation experts. Engage TIF members to look for overlaps and opportunities to bring this planning into the PBC system.
5. Expand the implementation plan; review with MDE initiative leaders; expand/adjust with feedback.
6. Target first-adopting districts with MDE initiative leaders.
7. Bring the early-adopting districts into the planning; review the system as it has developed; expand with local feedback; and set a target date to begin local implementation.
8. Develop the communication plan:
    a. Actions for PBC system districts/schools to identify and engage local stakeholders (e.g., key community leaders, PTO leadership, boards of directors, etc.).
    b. Identify resources required (e.g., on-going, electronic communications for updates, news releases, etc.).
    c. Develop ways and means to keep teachers informed and up-to-date.
9. Draft the proposal for the local implementation plan; review with early-adopting superintendents, principals, and teachers; gather input.
10. Create an implementation guide for principals, including training materials for principals and teachers.

Local Implementation Plan

This plan document serves to guide the principals through the implementation process. It includes steps to

- Train principal on merging PBC with appraisal process.
- Provide principal support in announcing the PBC system to all of the staff.
- Support follow-up meetings with teachers to further explain the system and how it fits into their existing appraisal process; share payout schedules; answer questions.

- Define problem-solving protocols.
- Establish milestones with principals to manage implementation and continuation.
- Implement PBC.
- Celebrate success.

Implementation Milestones

Setting target dates for the completion of key implementation actions keeps the implementation moving forward or signals issues impeding progress. These target dates associated milestones evolve from the full implementation plan but include:

- Obtaining support/cooperation from MDE initiative managers
- Developing PBC system mechanics (See Payouts)
- Identifying first adopting districts
- Completing communication plan for state and locations
- Completing local implementation guide including principal training
- Target date to implement first location
- Organizing/first meeting of the governance team

In summary, implementing PBC begins with naming its manager/champion, gaining endorsement from key MDE leadership, collaboration with the teacher appraisal manager to merge PBC into its process, detailing the PBC system, building relationships with early-adopting districts/principals, developing a communication plan, detailing the local implementation guide, and identifying key milestones to keep the implementation on track.

Governance

Embedding any new system into a ***real environment*** may result in unforeseen problems and unintended consequences. A governance team addresses both problems and consequences.

Comprised of the PBC system champion/manager, MDE staff representing the teacher appraisal and CCSS implementations, one superintendent, two or three principals, and two or three teachers, all from different schools implementing PBC, this team supports local implementation work as the first contact for local

problem-solving. Teachers' participation on this team serves two purposes: first, the teacher is the direct beneficiary of PBC. Second, their classroom perspective will be different from their principals', particularly as issues arise from blending the teacher appraisal and the PBC system. Those in roles that change initiative targets know best if/how the changed objectives are actually being realized.

Table 9: Governance Team Suggestion

Governance Team (8-10 members)	○ PBC champion ○ MDE teacher appraisal and CCSS staff responsible for teacher appraisal and CCSS implementation (2) ○ District superintendents (1) ○ High, middle, and elementary school principals (3-4) ○ Classroom teachers (2)

The purpose of this team is to provide a ready, easily-accessible resource for schools in their first year implementing PBC. This team is a problem-solving/question-answer team, designed and empowered to review/resolve immediate, unexpected issues unique to a PBC implementation. There will be some; there could be many. Most problems and issues will be common to districts; this team is in place until these are identified and solutions documented for local use. Until three or four districts are implementing PBC, the PBC champion serves this role.

Once organized, the governance team electronically convenes monthly with principals implementing PBC to check on progress, share successes, and solve problems. Led by the champion, these regularly scheduled, Web-based meetings facilitate this communication.

The meeting agenda is focused:

1. All principals register issues and problems.
2. Common problems are discussed and resolved or action plans/timetable for resolutions are set.
3. One-off problems are addressed with those needing support; other team members exit the meeting.
4. Meeting adjourned.

Once the purpose of this team has been met, a mentoring program can begin whereby experienced principals mentor other principals initiating PBC, pushing implementation support down into the schools where the realities of implementation occur. Mentorships leverage implementation experience. Principals on the governing team, the first mentors, rotate off the governing team, replaced by new principals *only as long as program problem solving requires this amount of governance team support.*

As the PBC system matures, as most unique issues are identified, resolved, and documented, the need for governance and mentors diminishes and PBC oversight joins the MDE/district management process.

Risks

There are significant risks to not only the system design but to implementing a PBC system:

1. The purpose of PBC is to drive sustained student achievement by rewarding teachers who become more effective in the classroom. The imminent CCSS heighten the need and build urgency. The biggest risk to PBC system success is that the system itself never reaches the classrooms. If districts do not see the need to reinforce teacher competency growth with a PBC system and refuse to fund the program, the system fails by default.
2. PBC is not simply a different way to compensate teachers; success requires a different principal mindset, namely that nothing is more important than increasing student achievement; that effective teaching is the best and most direct way to get there; that increasing teacher effectiveness requires persistent, consistent managing of the teacher appraisal process; that more students achieving more is worth changing how we reward teachers; and that funding PBC is worth diverting funds from programs with less impact on student growth.
3. Another risk is that the principals fail to execute the teacher appraisal process as it is designed, and its effectiveness gets lost in the shuffle of the school day. Teachers in this project's focus group meetings shared their fear that principals may not take the time necessary to manage the evaluation process as it is structured. "There are a lot of teachers and only a few principals," teachers shared, "Is the program asking too much of principals already spread thin managing our school?"
4. Giving too much weight to value-added measures to track student performance is yet another risk. While a far superior measure of student

achievement than is now available, statistical algorithms are just algorithms. Their usefulness can be stretched beyond their intended purpose.

5. Assuming that PBC is implemented through the MDE, lack of full support and endorsement by the state superintendent will cause PBC to fail. If implemented outside of the MDE, full support and endorsement by an undisputed leader similarly will cause PBC to fail. There will be resistance; strong leadership will be necessary to push through it—or to push it aside.
6. Without the endorsement and cooperation of MDE teacher appraisal process managers to incorporate PBC into this process, the potential impact may not be realized. The merger with teacher appraisal adds the weight of this program to PBC, and vice versa.
7. As long as state-mandated pay increments continue merely for years of service and degrees earned without regard for measured improvements in teaching effectiveness and increases in student achievement, the benefit of compensation for *performance* will not be realized and principals will lose a valuable tool to motivate teachers to fill teaching skill gaps faster so that student achievement will increase faster.
8. As long as local districts continue to pay supplements merely for years of service and degrees earned without regard for measured improvements in teaching effectiveness and increases in student achievement, the benefit of compensation for *performance* will not be realized and principals will lose a valuable tool to motivate teachers to fill teaching skill gaps faster so that student achievement will increase faster.
9. If the current education culture in which too many students do not achieve forces critical PBC success factors to be compromised and creates a system that rewards the majority of teachers, PBC loses its potential to drive intended performance.

Conclusion

With high schools struggling, even, as we learned recently, cheating to graduate students, with 4th graders' reading levels still regarded as a reliable predictor of our future prison populations, with too many students continuously underachieving in too many schools year after year, Mississippi is compelled to implement every initiative it can that will drive effective teaching. PBC systems are demonstrating to be such an initiative. PBC is certainly not new, but effective PBC systems for teachers are. New systems bring uncertainty, challenges, and risks. If these result in timid or ill-informed leaders dressing up traditional solutions in new clothing, touting them as "change" or, even worse, doing nothing, then we continue to compromise the future of too many of our children by the end of the 3rd grade when the failures of teachers and school administrators begin to reveal themselves.

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Appendix A:
Current System and Future Scenario

Overview of Current Compensation System

Core elements of the current compensation system:

- State law 37-19-7 establishes a minimum salary schedule for teachers based on years of service and degree. The state salary schedule defines what is known as the “step increase” or requires an increase in salary each year. Districts must fund the step increase.
- Most school districts add a “local supplement” to the state required base pay. Local supplements vary and some are also based on degrees held and years of service.
- Most school districts also add supplements for additional duties, such as (a) coaching; (b) supervising extracurricular programs requiring after school time like band, chorus, drama, cheerleading; (c) lead teacher, instructional coach, or department head; and (d) interim responsibility.

The current 2012-2013 salary schedule follows.

Current 2012-2013 Salary Schedule

	Yrs. Exp.	2012-13 MAEP Salary Schedule AAAA	2012-13 MAEP Salary Schedule AAA	2012-13 MAEP Salary Schedule AA	2012-13 MAEP Salary Schedule A
BASE	0	35,020	33,990	32,960	30,900
Incremental for 1-35 Yrs		794	727	660	495
Base + Increment	1	35,814	34,717	33,620	31,395
	2	36,608	35,444	34,280	31,890
	3	37,402	36,171	34,940	32,385
	4	38,196	36,898	35,600	32,880
	5	38,990	37,625	36,260	33,375
	6	39,784	38,352	36,920	33,870
	7	40,578	39,079	37,580	34,365
	8	41,372	39,806	38,240	34,860
	9	42,166	40,533	38,900	35,355
	10	42,960	41,260	39,560	35,850
	11	43,754	41,987	40,220	36,345
	12	44,548	42,714	40,880	36,840
	13	45,342	43,441	41,540	37,335
	14	46,136	44,168	42,200	37,830
	15	46,930	44,895	42,860	38,325
	16	47,724	45,622	43,520	38,820
	17	48,518	46,349	44,180	39,315
	18	49,312	47,076	44,840	39,810
	19	50,106	47,803	45,500	40,305
	20	50,900	48,530	46,160	40,800
	21	51,694	49,257	46,820	41,295
	22	52,488	49,984	47,480	41,790
	23	53,282	50,711	48,140	42,285
	24	54,076	51,438	48,800	42,780
Add'l Increment for 25th Year		2,060	2,060	2,060	2,060
	25	56,930	54,225	51,520	45,335
	26	57,724	54,952	52,180	45,830
	27	58,518	55,679	52,840	46,325
	28	59,312	56,406	53,500	46,820
	29	60,106	57,133	54,160	47,315
	30	60,900	57,860	54,820	47,810
	31	61,694	58,587	55,480	48,305
	32	62,488	59,314	56,140	48,800
	33	63,282	60,041	56,800	49,295
	34	64,076	60,768	57,460	49,790
	35 & Above	64,870	61,495	58,120	50,285

Legend AAAA - Doctorate
AAA - Specialist
AA - Master's Degree
A - Bachelor's Degree

	Base	Current # of Incremental Steps	Amount of Increment
A	$30,900	35	$495
AA	$32,960	35	$660
AAA	$33,990	35	$727
AAAA	$35,020	35	$794
Includes $2060 increase at 25 years			

NOTE: Assistant Teachers - $12,500 (MS Code Section 37-21-7 (6))

Recommendation for a New Teacher Compensation System

Core elements of a new compensation system framework:

State law only defines a minimum entry-level salary for new teachers with 0 years of experience based on degree held at entry. State law does not mandate a step increase. The suggestion is to set the base at the current 0-year levels for 2012-2013.

- Local school districts shall establish salary schedules meeting the minimum entry-level established by the State. Salary schedules may include "based-building" components and one-time bonus payouts. Base building criteria are designed to increase the base salary of an individual within a given district. One-time bonus payouts may be built in the plans and do not add to the base salary.

- Local district salary schedules for teachers and administrators shall be based upon the following criteria, with no one criterion accounting for more than 50% of the formula used to compute such salaries:

1. Effectiveness:
    a. Performance Appraisal: as determined by the performance evaluation programs (M-STAR for teachers and the Principal Evaluation System for administrators).
2. Demand:
    a. Based upon critical subject areas or certifications
    b. Based upon teaching in high need schools or low performing schools

- No teacher or administrator who is rated "unsatisfactory" on the performance evaluation system shall receive a salary higher than that received in the previous school year.

- Districts may establish bonus or incentive pay plans based on performance. Bonuses or incentives are one-time payments designed to reward highly effective teachers and administrators.

Various approaches are available for local districts to design a salary schedule with "base building" components and "one-time bonuses" according to performance indicators. There are examples of approaches available from districts around the country. The following scenario serves only as one such example. It is important that each district take 6-9 months with local stakeholders to determine the details of a compensation system that will comply with the State-defined framework.

Sample Scenario

	Base Building (add to base salary for services years 1 – 25)			1-Time Bonus		1-Time Bonus	
	M-STAR Appraisal			M-STAR Appraisal		School Rating Achievement	
	Distinguished	Effective	Emerging	>3.75	3.5 – 3.74	A	B
Teacher (Core Area)	2%	1%	0.50%	10%	5%	$1500	$750
Teacher (Non-Core)	2%	1%	0.50%	10%	5%	$1500	$500
Ancillary Certified Staff						$1000	$500
Support Staff						$500	$250
Teacher Assistants						$500	$250
Principals	2%	1%	0.50%	5%	3%	$2500	$1000