Deliberate Practice for Deliberate Growth:
Teacher Evaluation Systems for Continuous Instructional Improvement

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OUR MISSION

Learning Sciences Marzano Center promotes excellence in public education by providing and developing next-generation teacher and leader evaluation tools and training. Built on a foundation of expert research into best practices under the direction of national researcher and author Dr. Robert Marzano and staffed by a team of education experts, the Marzano Center identifies, develops, and disseminates cutting-edge resources in educational best practices. Our goal is to support teachers to be highly effective, lifelong learners, and in doing so, to significantly impact student growth and achievement over time.

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EXECUTIVE SUMMARY

Although great gains in teacher evaluation have been made in the past several years, current teacher evaluation models and practices across the U.S. are still in their infancy. Many systems are not yet in synch with the demands of the 21st century, and many more may not address the rigor of the new Common Core State Standards. A central question remains: Is the purpose of teacher evaluation simply to measure teacher expertise, or is the purpose of teacher evaluation to help teachers improve their instructional practice?

Thinking on this question has begun to shift, as policymakers and departments of education refine their visions of what the most effective teacher evaluation systems can and must do to properly prepare schools, teachers, and students for the challenges of a new century. In Rethinking Teacher Evaluation in Chicago: Lessons Learned From Classroom Observations, Principal-Teacher Conferences, and District Implementation, Sartain, Stoelinga, and Brown et al. (2011) put the problem succinctly:

If two primary objectives of evaluations are to provide teachers with information that they can use to improve their teaching practices and to provide teachers with evaluation ratings that accurately capture their classroom performance, then research confirms that traditional evaluation systems are broken. They typically fail to provide teachers with the information they need to make timely and effective improvements in their instructional practice. Often, they rely upon a single observation by a principal, who is minimally trained as an evaluator. At the same time, many evaluation tools are seen as subjective, rendering evaluation meaningless. (p. 3)

States must now consider how their evaluation models may or may not foster teacher growth, instructional improvement, and student success in the face of rigorous new standards. With the adoption of Common Core State Standards in 45 states and the District of Columbia, there is a crucial need for rapid teacher development and expertise in instructional strategies.

Although research clearly identifies teacher skill as one of the most, if not the most, important factors in driving student achievement, most existing approaches to evaluation do not adequately address teacher growth.

Although research clearly identifies teacher skill as one of the most, if not the most, important factors in driving student achievement, most existing approaches to evaluation do not adequately address teacher growth. At present, many evaluation models lack the specific, growth-oriented feedback teachers need to improve instructional practice, and few teacher evaluation models are designed to produce measurable gains in teacher performance. Time and other resources must also be allocated to train teachers as well, providing teachers with the opportunity to observe other expert teachers.

Significant research has also shown that deliberate practice — a focused loop of intense practice on specific skills, followed by targeted feedback and further practice — is a proven pathway for any person in any discipline to improve virtually any skill (Ericsson,
Krampe, & Tesch-Romer, 1993). The most successful teacher evaluation models for the 21st century will be those developed on a foundation of deliberate practice to systematically and measurably build teacher expertise.

Certainly, some states may opt to continue using measurement-centric, rather than developmental, evaluation models. Change is disruptive and, at least in the short term, expensive. Nevertheless, evaluative approaches focused on measurement only will certainly fail to show gains in teacher performance. In the long-term, the economic cost of stagnating teachers unprepared to face rigorous new academic standards could be enormous. Research from Chetty and colleagues (2012), for example, showed that students not assigned to high value-added teachers are less likely to attend college, have higher rates of teen pregnancy, earn less money, live in lower socioeconomic status neighborhoods, and enter retirement with less in savings.

Alternately, states which adopt a developmental evaluation model with a strong foundation in deliberate practice should expect to see steady improvement in teacher quality and a concurrent increase in student test scores over time, which research indicates provides life long benefits as students enter the workforce.

Certainly, states and districts adopting a teacher evaluation system with a focus on deliberate practice will face challenges. Evaluation models built on principles of deliberate practice call for more frequent teacher observations, more intensive focus on very specific instructional strategies, and more initial professional support to faithfully implement a complex teaching framework. Due to the extraordinary complexity of teaching, the instructional framework must be based on recent research that properly reflects the current educational landscape.

Administrators need training so they can competently implement deliberate practice. And the benefits are many. With a developmental evaluation framework, teachers know precisely which classroom behaviors evaluators are seeking. Evaluators, too, know precisely what behaviors to observe. The resulting evaluations are more likely to be fair, highly defensible, and accurate. Teachers will understand how to improve.

But perhaps most importantly, such systems transform the often negative culture of teacher evaluation. Evaluation is no longer something “done to” teachers by disinterested observers. Rather, teachers and administrators become partners in the service of a goal to improve their skills. By engaging in deliberate practice as part of a systematic evaluative system, teachers have a stake in their own professional growth.

Teachers become the agents of their own expertise.
INTRODUCTION
Deliberate Practice: Evaluation Systems to Build a Workforce of Skilled Teachers

The United States is uniquely positioned to achieve measurable gains in student performance, though it will require a fundamental shift in both perspective and policy. Significant research proposes that teacher skill — not books, not technology, not buildings, not even class size — might be the single most powerful variable in improving student performance (Hanushek, 1992; Ball & Forzani, 2009; Ball, Sleep, Boerst, & Bass, 2009; Grossman, Hammerness, & McDonald, 2009; Grossman & McDonald, 2008; Lampert, Beasley, Ghousseini, Kazemi, & Franke, 2010; and Hiebert & Morris, 2012).

But how, then, is classroom instructional skill best developed? A focus on teacher qualifications, academic achievement, and/or advanced certifications — in effect, a teacher’s professional pedigree — does not adequately measure how skilled teachers really are when faced with a classroom of students. In a study published by the Rand Corporation, Buddin and Zorrow (2009) found that traditional teacher qualifications had little influence on student achievement, neither was student achievement impacted by teacher licensure scores. And in Teaching, Rather Than Teachers, as a Path Toward Improving Classroom Instruction, Hiebert & Morris (2012) exposed a longstanding cultural and educational bias toward improving teacher characteristics (education and enthusiasm) rather than their pedagogy and classroom behaviors. They alternately proposed an approach that engages teachers and administrators to improve teaching.

Research has also shown that expertise in teaching strategies trumps a teacher’s subject-matter knowledge. In a study comparing the effects of subject matter expertise versus pedagogical knowledge, Berliner (2000) found that pedagogical knowledge was a better predictor of effective teaching than knowledge of subject matter. “It appears . . . that possessing a good deal of pedagogical knowledge and pedagogical content knowledge makes one a better teacher. Subject matter knowledge is simply not enough to make one an accomplished teacher” (p. 359). However, neither subject knowledge nor pedagogy is addressed in any substantive form in most current evaluation systems.

But do better teachers actually produce better students? According to research, yes. More than a decade ago, in 2001, Harold Wenglinsky’s research was able to confirm the hypothesis that “of the aspects of teacher quality, classroom practices will have the greatest effect” on student achievement (p. 29). The author further noted that “a focus on higher

“…of the aspects of teacher quality, classroom practices will have the greatest effect” — Wenglinsky, 2001
order thinking skills is associated with improved student performance” (p. 35).

More recently, Robert J. Marzano found that teachers who focus on specific ‘thin slices’ of instruction and execute classroom strategies at a high level of skill will see student test scores improve. In a summary of studies conducted on the teacher evaluation model developed from his Art and Science of Teaching framework, Marzano reported that “the more strategies teachers used and the better they executed them, the greater their students’ achievement in terms of both status and growth” (Marzano, Toth & Schooling, 2012, p. 1). An aggregate of studies determined that as teachers improved at using the classroom strategies and behaviors in the Marzano Teacher Evaluation Model, typical student achievement increased by 16 percentile points on average.

There is ample evidence that teacher instructional practice can be improved with focused, research-based approaches to the development of teacher expertise.

And in January 2013, the Bill & Melinda Gates Foundation released Ensuring Fair and Reliable Measures of Effective Teaching: Culminating Findings from the MET Project’s Three-Year Study. “The data show that we can identify groups of teachers who are more effective in helping students learn,” the authors noted. “In addition, we found that more effective teachers not only caused students to perform better on state tests, but they also caused students to score higher on other, more cognitively challenging assessments in math and English” (p. 5).

For most schools and districts, firing ineffective teachers and hiring replacements is costly and inefficient. There is ample evidence that teacher instructional practice can be improved with focused, research-based approaches to the development of teacher expertise. One such approach, validated by decades of research, is deliberate practice.

The most valuable evaluation model will not only meet state legislative requirements, it must produce gains in student learning. The model must evaluate teachers and, just as importantly, improve their classroom performance over time. Next-generation models, grounded in sound research, will emphasize teacher growth and development. As teachers’ classroom instructional practice improves, districts should see a corresponding improvement, measurable and consistent, in student achievement.

– Robert J. Marzano, Examining the Role of Teacher Evaluation in Student Achievement, 2012
Deliberate Practice: The Marriage of Intense Focus, Commitment, and Expert Feedback

A professor of psychology at Florida State University and a leading international expert in deliberate practice, K. Anders Ericsson has spent decades studying the differences between expert performers and normal performers. Ericsson (2006) believes that expertise reflects a lifelong period of deliberate effort, at least 10,000 hours, to improve in a specific area. Among Ericsson’s findings is that the level of expertise one achieves with a skill has more to do with how one practices than with merely performing a skill many times. Ten thousand hours of practice using inefficient — or wrong — techniques will not produce an expert.

Deliberate practice, as Ericsson defines it, must include specific, focused, and actionable feedback. Without the feedback loop, practice loses its deliberative quality. Ericsson, Krampe, and Tesche-Romer (1993) noted that “to assure effective learning, subjects ideally should be given explicit instructions about the best method and be supervised by a teacher to allow individualized diagnosis of errors, informative feedback, and remedial part training” (p. 367). Continuous improvement with deliberate practice will produce expertise over time.

An individual seeking to become expert via deliberate practice does the following:

- Breaks down the specific skills required to be an expert
- Focuses on improving those particular critical skill chunks during practice or day-to-day activities (as opposed to practicing the easy tasks)
- Receives immediate, specific and actionable feedback, particularly from a more experienced coach
- Continually practices each critical skill at more challenging levels with the intention of mastering it, giving far less time to skills already mastered

Targeted, specific feedback from a coach, mentor, or supervisor is a crucial component in developing expertise. Brabeck and Jeffrey (2012) noted the difference between deliberate practice and rote repetition:

Researchers who have investigated expert and novice performance have uncovered important distinctions between deliberate practice and other activities, such as work, play, and rote repetition. Rote repetition — simply repeating a task — will not automatically improve performance. Effective practice is deliberate. It involves attention, rehearsal, and repetition and leads to new knowledge or skills that can later be developed into more complex knowledge and skills. (p. 1)

Neuroscientist William Jenkins (2012) emphasized that “research has shown us time and again that the more we utilize certain neural pathways for building skills — such as throwing a ball or multiplying by fives or recalling all 50 state capitals — the more effectively we ingrain those patterns in our brains and the more automatic the correct skills become.” By focusing on improving specific instructional strategies, teachers practice over and over until they develop automaticity; at the attainment of automaticity, the teacher can focus on the effect a strategy has on students rather than focusing on the strategy itself.
Deliberate practice has been shown to drive improvement for every mental and physical process to which it has been applied (Shenk, 2010). “‘Super-elites’ in many disciplines practice deliberatively, for example, in music (Yo-Yo Ma), chess (Magnus Carlsen), sports (Michael Jordan); it is a factor in language acquisition, memory, and more. Shenk (2010) even went so far as to say that deliberate practice was the driving force behind all super-elites in any field, rejecting the notion of "giftedness" or "natural talent."” Ericsson, Krampe, and Tesch-Romer (1993) have argued that deliberate practice creates expert performance, regardless of subject or field.  

Deliberate practice is a proven pathway to measurable improvement. But what are the implications for effective classroom teaching? Research has linked the application of deliberate practice to K-12 teaching; as Dunn and Shriner (1999) reported in Deliberate Practice in Teaching: What Teachers do for Self-Improvement: “Several common and routine aspects of teaching emerged as ones displaying the characteristics of deliberate practice as it is described by Ericsson et al. (1993)” (p. 631).

When we consider the research indicating that more effective teachers produce better students (Gates Foundation, 2013; Marzano, 2012) and that deliberate practice is a proven pathway to build expertise (Shenk, 2010), and noting that deliberate practice can be applied to K-12 teaching activities (Dunn & Shriner, 1999), it is likely that deliberate practice for teachers is a pathway for improving student performance. Deliberate practice is an effective developmental strategy to help turn low-performing teachers into effective teachers and to help turn effective teachers into highly effective teachers.

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1Deliberate practice has been shown to build expertise in countless areas, including teaching clinical skills to medical students (Ericsson, 2004), Michael Jordan’s jump shots (Shenk 2010), chess (Charness, Tuffiash, Krampe, Reingold, & Vasyukova, 2005), violin instruction (Shenk 2010), management (Unger, Keith, Hilling, Gielnik, & Frese, 2009), insurance sales (Sonnenberg & Kleine, 2010), typing (Ericsson, 2006), figure skaters (Starkes, Deakin & Allard, 2010), and even cup stacking competitions (Mortimer, Krysztofiak, Custard, & McKune, 2011).

2A century ago, only a handful of violinists in the world were capable of performing the compositions of Paganini. The culture of violin instruction has been heavily based on deliberate practice strategies, and the teaching strategies have improved so much over time that now, a century later, Paganini’s works are regularly performed by children.
A focus on deliberate practice in the professional development of teachers allows schools and districts to obtain maximum results from an existing pool of resources; it helps teachers stay current and gives them agency in their own professional development. As Paul Mielke (2012) noted in his comparative study of two teacher development models:

* Educators currently live in an ever-changing world that is being created and recreated before our very eyes on a continual basis. The rapidly changing world will put an emphasis on people’s ability to improve just to maintain their level of performance. These rapid changes will have an impact on everyone, not just those who seek to become experts. According to Ericsson (2006), individuals must participate in deliberate practice just to maintain their current skill level. (p. 30)

Getting Teacher Buy-In: The Case for Developmental Evaluation Models

In *The Two Purposes of Teacher Evaluation* (2012), Marzano has this to say about the dual purposes of effective teacher evaluation models:

> Both measurement and development are important aspects of teacher evaluation. When measurement is the primary purpose, a small set of elements is sufficient to determine a teacher's skill in the classroom. However, if the emphasis is on teacher development, the model needs to be both comprehensive and specific and focus on the teacher's growth in various instructional strategies. These distinctions are crucial to the effective design and implementation of current and future teacher evaluation systems. (p. 14)

**Teacher evaluation actually has the potential to encourage teacher autonomy by giving classroom educators a powerful voice in directing their own growth and the achievement of mastery over time.**

A developmental teacher evaluation system aligned to deliberate practice is most likely to foster teacher motivation, engagement, and happiness. Pink (2009) identified three primary drivers for individual happiness: autonomy, mastery, and purpose. Teacher evaluation actually has the potential to encourage teacher autonomy by giving classroom educators a powerful voice in directing their own growth and the achievement of mastery over time. Mastery is facilitated with a robust collection of research-based teaching strategies to span an entire career of continuous improvement. Finally, a focus on student achievement creates a sense of purpose and meaning.

**Policy Recommendation**

The policy recommendation is for states and school districts to adopt a developmental teacher evaluation model rooted in teacher growth, which encompasses the following:

1. Incorporating deliberate practice to drive teachers to improve in research-based classroom strategies;
2. Showing teachers what needs to be improved and how to improve;
3. Giving meaningful and specific feedback to teachers (from trained observers, evaluators, mentors, peers, etc.) that can be used for deliberate practice;
4. Measuring teacher growth in research-based classroom strategies;
5. Aligning with Common Core State Standards;
6. Measuring student learning progression; and
7. Demonstrating the highest level of improvements in student performance.
Policy Implications of Evaluation Systems Aligned to Deliberate Practice: Economic Impact

Research has established that deliberate practice improves performance. Multiple studies have also shown the correlation between highly effective teachers and increased student achievement. But the policy implications for improving teachers go well beyond the K-12 classroom walls. By definition, improving the instructional skills of teachers will increase the value they add to students in their classrooms. Assessing the impact of value-added teachers (teachers who had a positive impact on student test scores), Chetty and colleagues (2012) noted in *The Long-Term Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood*:

> Students assigned to high-VA teachers are more likely to attend college, attend higher-ranked colleges, earn higher salaries, live in higher SES neighborhoods, and save more for retirement. They are also less likely to have children as teenagers. Teachers have large impacts in all grades from 4 to 8. On average, a one standard deviation improvement in teacher VA in a single grade raises earnings by about 1% at age 28. [Abstract]

The cumulative effect of improving teachers is not just a higher score on a high-stakes academic assessment. Improving teachers leads to reduced teen pregnancy, higher graduation rates, increased (and better) college attendance, increased lifetime earnings, and more stable retirement. As Chetty and colleagues went on to say, “The most important lesson of this study is that finding policies to raise the quality of teaching — whether via the use of value-added measures, changes in salary structure, or teacher training — is likely to have substantial economic and social benefits in the long run” (p. 51).

On average, a one standard deviation improvement in teacher VA in a single grade raises earnings by about 1% at age 28.
The Need for Change: A Brief History of Teacher Evaluation

In their influential paper, *The Widget Effect*, Weisberg and colleagues (2009) noted that teacher evaluation systems have traditionally done little, if anything, to address the effectiveness of individual teacher’s instructional strategies. Toch and Rothman (2008) in *Rush to Judgment: Teacher Evaluation in Public Education* levied heavy criticism against traditional evaluation practices as well, noting that evaluation systems are “superficial, capricious, and often don’t even directly address the quality of instruction, much less measure students’ learning” (p. 1). A 2012 report from the Gates Foundation, *Gathering Feedback for Teaching*, took aim at teacher evaluation systems:

> The nation’s collective failure to invest in high-quality professional feedback to teachers is inconsistent with decades of research reporting large disparities in student learning gains in different teachers’ classrooms (even within the same school). The quality of instruction matters and our schools pay for little attention to it. (p. 3)

What the research does show is that improving teachers’ pedagogical skills is the pathway to gains in student achievement. Nye and colleagues’ (2004) research suggests the difference between a teacher at the 25th percentile and a teacher at the 75th percentile is 14 percentage points in students’ reading performance and 18 percentage points in mathematics.

Still, there is a considerable gap between what research knows and what U.S. educational policies do. As Hiebert and Morris wrote in 2012:

> The history of U.S. education is filled with efforts to improve schools and classrooms (Tyack & Cuban, 1995). What approaches have been tried to improve the quality of classroom instruction? The U.S. approach frequently has focused on improving the quality of the teachers (Kennedy, 2010). This approach includes recruiting people with the right characteristics (e.g., distinguished academic records, strong content knowledge, high motivation, desirable personality traits; e.g., teachforamerica.org), training preservice and inservice teachers to acquire these characteristics, and removing teachers who are presumed not to exhibit them as evidenced by their poor performance (usually measured by students’ achievement scores; Klein et al., 2010). As will be seen later, the United States persists with this approach even though the data linking any of the characteristics mentioned above with students’ learning are weak, and the historical record shows no lasting impact of this approach (Cuban, 1993; Hoetker & Ahlbrand, 1969). (pp. 92-93)

> … there is a considerable gap between what research knows and what U.S. educational policies do.

> … the difference between a teacher at the 25th percentile and a teacher at the 75th percentile is 14 percentage points in students’ reading performance and 18 percentage points in mathematics.
According to a study of achievement scores from more than 100,000 students across hundreds of schools, Wright and his colleagues (1997) found that “effective teachers appear to be effective with students of all achievement levels, regardless of the level of heterogeneity in their classrooms” (p. 63). As noted above, recent research from the Gates Foundation (2012) confirms this finding and also confirms that it is, in fact, possible to accurately measure teacher effectiveness.

The point is not that traditional teaching frameworks and evaluation systems do not improve teachers. But next-generation systems, built upon a foundation of deliberate practice, lead to greater, more focused improvements in specific areas of instructional practice that correlate with student achievement. Founded upon research-based teaching strategies, teacher evaluation models that are aligned to deliberate practice bring even more focus to the specific skills shown to improve student learning.
Effective Teaching Improves Student Performance

What effect do teachers have on students as they improve their teaching skills? Table 1 demonstrates the significant impact teacher skill level has on the percentile rank of students:

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<th>Percentile Rank Teacher Skill</th>
<th>Percentile Gain Student</th>
<th>Percentile Rank Student</th>
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<tr>
<td>50th</td>
<td>0</td>
<td>50th</td>
</tr>
<tr>
<td>70th</td>
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<td>58th</td>
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<td>90th</td>
<td>18</td>
<td>68th</td>
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<tr>
<td>98th</td>
<td>27</td>
<td>77th</td>
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Table 1: Teacher Skill and Student Gains
Adapted from Effective Supervision: Supporting the Art and Science of Teaching (p. 2) by Marzano, Frontier, and Livingston, 2011, Alexandria, VA: Association for Supervision and Curriculum Development.

As teacher skill improves up the scale, students show a corresponding expected percentile gain; students taught by a teacher in the 98th percentile show a gain of 27 percentage points over students with a teacher ranked in the 50th percentile. Even in the most conservative projection, if teachers were only to improve their pedagogical skills by two percentile points a year over a 10-year period, their students would be expected to increase their achievement by eight percentile points.

The final Measures of Effective Teaching report released in January 2013, bolsters this view of the impact good teachers have on student learning: “On average, students of teachers with higher teacher effectiveness estimates outperformed students of teachers with lower teacher effectiveness estimates” (“Ensuring Fair and Reliable Measures,” p. 8.) As teacher expertise increases, it is highly likely that schools and districts will see a corresponding increase in student learning gains over time.

Borman and Kimball (2005) note that the difference between a highly effective and an ineffective teacher can translate into one full grade level in just one school year. What is more, the effect is cumulative. The performance of fifth-grade students was found to be connected to the quality of their third-grade teacher.

The data is clear; teachers matter.

... the difference between a highly effective and an ineffective teacher can translate into one full grade level in just one school year. What is more, the effect is cumulative. The performance of fifth-grade students was found to be connected to the quality of their third-grade teacher.
Continuous Improvement for All Teachers

It is important to note that teacher improvement cannot and should not end with mastery of existing skills. For U.S. students to be competitive, teachers must continue to master new skills and innovations in teaching strategies for their entire careers. With a teacher evaluation model based on deliberate practice and drawing on research-based teaching strategies linked to student improvement, a continuous-improvement developmental model can mitigate or eliminate stagnation and performance dips.

With traditional evaluation models, most teachers are offered limited triggers to seek improvement. A model aligned to deliberate practice provides continuous feedback in areas needing improvement and calls for measured improvement throughout a teacher’s entire career.

An evaluation model that incorporates a focus on deliberate practice asks every teacher — veteran or fresh from college — to focus on strategies shown to improve student performance.

An evaluation model that incorporates a focus on deliberate practice asks every teacher — veteran or fresh from college — to focus on strategies shown to improve student performance. Every teacher, with the help of an experienced coach or mentor, identifies strategies on which to work and sets goals for growth. Teachers work on specific steps identified to improve their use of the instructional strategies. Teachers plan and lead their own deliberate practice plans in partnership with their principals and other evaluators.

As teachers deliberately practice using specific, research-based teaching strategies, applying the correct strategy to the correct type of lesson, receiving feedback, and practicing again, they increase their expertise. Duhigg (2012) showed that such a sustained focus on specific daily actions leads to the formation of powerful habits. This “thin slice” approach calls for multiple opportunities for feedback, in contrast to the once or twice per year assessment common to traditional evaluation systems. Instead of 30 to 60 measurement points over an entire teaching career, the deliberate practice-aligned model provides hundreds.

Further, advances in technology now offer teachers the opportunity to record their own classroom practice for self-evaluation and reflection; and to observe other teachers (even teachers in other schools, states, or countries) virtually. Much as professional athletes watch hours of tapes to evaluate their own performance, teachers may now coach themselves and their colleagues to build expertise when multiple observations are limited by time or distance constraints.

As teachers demonstrate mastery through action in the classroom, an evaluation model incorporating deliberate practice fosters an ongoing process that calls for teachers to seek out a mentor, receive coaching, and collaborate with others to improve specific strategies. The evidence for improvement is a demonstrated, measurable change in classroom behavior and a clear learning progression.
Developmental Teacher Evaluation Models: The Next Generation

As we have noted, the next generation of teacher evaluation models will focus not just on measuring teachers but also on developing them to meet the new challenges of education reform initiatives and the demands of the 21st century. Measurable improvement of teacher practice relies on measurable improvement of specific instructional skills correlated with gains in student achievement.

Research conducted on the Marzano Teacher Evaluation Model, for example, found that teachers improved pedagogical expertise by focusing and deliberately practicing specific classroom strategies identified in the 41 classroom instructional elements of the model (Marzano, 2010). A comparative study between the Marzano model and another well-known and widely used teacher evaluation model found that the greater specificity of instructional strategies in the Marzano model was perceived as more useful to teachers in terms of their growth and was also more likely to spur a change in practice (Mielke, 2012).

Evaluation models with the highest levels of granularity and specificity will produce the greatest results from deliberate practice:

- Give teachers and administrators specific, validated instructional tools to organize their pedagogical goals and attain mastery
- Provide a foundation of research conducted in the real-world environment of working classrooms
- Accommodate evolving state standards and directives
- Drive measurable increases in student achievement and student growth over time

When teachers are evaluated with a developmental, deliberate practice-aligned model, they are shown where they are in relation to where they have been, as well as where and how to achieve the next level of improvement in targeted instructional strategies.

Studies such as these indicate that evaluation models which offer greater specificity in instructional strategies, and which are developed to incorporate deliberate practice, are more likely to lead to teacher growth. An evaluation model incorporating deliberate practice is designed to do the following:

The specificity of the Marzano Observational Protocol allowed for participants to more easily monitor and modify their practice because it isolated behaviors and generated focused feedback. When feedback is more focused, it is more likely to be utilized because there is no confusion about the context or purpose. Finally, the shared vocabulary of the comprehensive teaching framework helps teachers to communicate more clearly and to identify specific behaviors or strategies while defining expectations. The specificity of the Marzano Observational Protocol had a profound effect on participants in this study. (pp. 314-315).

Evaluation models with the highest levels of granularity and specificity will produce the greatest results from deliberate practice.
Conclusion and Policy Recommendations

As we have noted above, there is still a sizeable gap between what research knows and what U.S. schools do; U.S. schools are continuing to perform at a mediocre level, falling to 17th among Organization for Economic Co-Operation (OECD) nations.

Teacher evaluation models built upon principles of deliberate practice are most likely to produce teacher growth. A growing body of research indicates that by improving teachers we can improve student performance. Higher performing students are likely to result in lower teen pregnancy rates, higher graduation rates (both high school and college), and increased lifetime earning potential.

Most teachers have the desire to improve, and all have the ability. Similarly, all students can learn. Deliberate practice, with its critical components of intense focus on specific skills, expert feedback, and teacher-driven cycles of continuous improvement, has been shown to be the most effective pathway to developing expertise.

Further:
- Most teacher evaluation models do not provide the specificity required for the best results from deliberate practice.
- Without deliberate practice and continuous improvement, teachers are likely to stagnate.
- Developmental evaluation models based in research, such as the Marzano Teacher Evaluation Model, have been shown to produce improvements in the classroom across both teacher and student performance.

Our policy recommendation is that states and school districts adopt a deliberate practice-aligned, teacher growth model, such as the Marzano Teacher Evaluation Model, which provides a deliberate practice component that drives teachers to improve in research-based classroom strategies.

The evaluation model that states and districts adopt must have the specificity to help teachers clearly identify what needs to be improved and ways to make those improvements. To be fully effective, the model must offer meaningful, honest, actionable, and specific feedback to teachers (from trained observers, evaluators, mentors, and peers) to further develop deliberate practice. The model should measure teacher growth in research-based classroom strategies aligned with Common Core State Standards. Lastly, the model must measure student learning progressions and demonstrate improvements in student performance.

By adopting a teacher evaluation model with a clear focus on deliberate practice, schools, districts, and states will know precisely how their teachers are performing. They will know and be able to measure the impact teachers are having on student performance. And they will have the data they need to ensure continuous growth for both teachers and students.

Robert J. Marzano is Executive Director of Learning Sciences Marzano Center for Teacher and Leader Evaluation and CEO of Marzano Research Laboratory. He is a nationally recognized researcher in education, speaker, trainer, and author of more than 30 books and 150 articles on topics such as instruction, assessment, writing and implementing standards, cognition, effective leadership, and school intervention. His books include District Leadership That Works, School Leadership That Works, Making Standards Useful in the Classroom, The Art and Science of Teaching, and Effective Supervision.

His practical translations of the most current research and theory into classroom strategies are internationally known and widely practiced by both teachers and administrators. He received a bachelor’s degree from Iona College in New York, a master’s degree from Seattle University, and a doctorate from the University of Washington. The Marzano evaluation models have been adopted by Florida and other states as well as school districts across the country; these complementary evaluation systems may be used with the iObservation technology platform for seamless integration.

Michael D. Toth is founder and Chief Executive Officer of Learning Sciences International, iObservation, the National Institute for Professional Practice, and Learning Sciences Marzano Center for Teacher and Leader Evaluation. Formerly the President of the National Center for the Profession of Teaching, a university faculty member, and director of research and development grants, Toth transformed his university research and development team into a company that is focused on leadership and teacher professional growth and instructional effectiveness correlated to student achievement gains. Actively involved in research and development, Toth gives public presentations and advises education leaders on issues of leadership and teacher effectiveness. He is also a co-author with Robert J. Marzano of Teacher Evaluation That Makes a Difference: A New Model for Teacher Growth and Student Achievement.
References


DELIBERATE PRACTICE FOR DELIBERATE GROWTH


The Marzano Teacher Evaluation Model Learning Map

Domain 1: Classroom Strategies and Behaviors

Domain 1 is based on the Art and Science of Teaching Framework and identifies the 41 elements or instructional categories that happen in the classroom. The 41 instructional categories are organized into 9 Design Questions (DQs) and further grouped into 3 Lesson Segments to define the Observation and Feedback Protocol.

Lesson Segment
Involving Routine Events

Lesson Segment
Addressing Content

Lesson Segment
Enacted on the Spot

DQ1: Communicating Learning Goals and Feedback
1. Providing Clear Learning Goals and Scales (Rubrics)
2. Tracking Student Progress
3. Celebrating Success

DQ2: Helping Students Interact with New Knowledge
6. Identifying Critical Information
7. Organizing Students to Interact with New Knowledge
8. Previewing New Content
9. Chunking Content into “Digestible Bites”
10. Processing of New Information
11. Elaborating on New Information
12. Recording and Representing Knowledge
13. Reflecting on Learning

DQ3: Helping Students Practice and Deepen New Knowledge
14. Reviewing Content
15. Organizing Students to Practice and Deepen Knowledge
16. Using Homework
17. Examining Similarities and Differences
18. Examining Errors in Reasoning
19. Practicing Skills, Strategies, and Processes
20. Revising Knowledge

DQ4: Helping Students Generate and Test Hypotheses
21. Organizing Students for Cognitively Complex Tasks
22. Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generation and Testing
23. Providing Resources and Guidance

DQ5: Engaging Students
24. Noticing When Students are Not Engaged
25. Using Academic Games
26. Managing Response Rates
27. Using Physical Movement
28. Maintaining a Lively Pace
29. Demonstrating Intensity and Enthusiasm
30. Using Friendly Controversy
31. Providing Opportunities for Students to Talk about Themselves
32. Presenting Unusual or Intriguing Information

DQ6: Establishing Rules and Procedures
4. Establishing Classroom Routines
5. Organizing the Physical Layout of the Classroom

DQ7: Recognizing Adherence to Rules and Procedures
33. Demonstrating “Withitness”
34. Applying Consequences for Lack of Adherence to Rules and Procedures
35. Acknowledging Adherence to Rules and Procedures

DQ8: Establishing and Maintaining Effective Relationships with Students
36. Understanding Students’ Interests and Background
37. Using Verbal and Nonverbal Behaviors that Indicate Affection for Students
38. Displaying Objectivity and Control

DQ9: Communicating High Expectations for All Students
39. Demonstrating Value and Respect for Low Expectancy Students
40. Asking Questions of Low Expectancy Students
41. Probing Incorrect Answers with Low Expectancy Students

Note: DQ refers to Design Question in the Marzano Art and Science of Teaching Framework. The nine (9) DQs organize the 41 elements in Domain 1.

The final Design Question, DQ10: Developing Effective Lessons Organized into a Cohesive Unit is contained in Domain 2: Planning and Preparing.

Domain 2: Planning and Preparing

Planning and Preparing

Planning and Preparing for Lessons and Units
42. Effective Scaffolding of Information within Lessons
43. Lessons within Units
44. Attention to Established Content Standards

Planning and Preparing for Use of Resources and Technology
45. Use of Available Traditional Resources
46. Use of Available Technology

Planning and Preparing for the Needs of English Language Learners
47. Needs of English Language Learners

Planning and Preparing for the Needs of Students Receiving Special Education
48. Needs of Students Receiving Special Education

Planning and Preparing for the Needs of Students Who Lack Support for Schooling
49. Needs of Students Who Lack Support for Schooling

Domain 3: Reflecting on Teaching

Reflecting on Teaching

Evaluating Personal Performance
50. Identifying Areas of Pedagogical Strength and Weakness
51. Evaluating the Effectiveness of Individual Lessons and Units
52. Evaluating the Effectiveness of Specific Pedagogical Strategies and Behaviors

Developing and Implementing a Professional Growth Plan
33. Developing a Written Growth and Development Plan
34. Monitoring Progress Relative to the Professional Growth and Development Plan

Domain 4: Collegiality and Professionalism

Collegiality and Professionalism

Promoting a Positive Environment
55. Promoting Positive Interactions with Colleagues
56. Promoting Positive Interactions about Students and Parents

Promoting Exchange of Ideas and Strategies
57. Seeking Mentorship for Areas of Need or Interest
58. Mentoring Other Teachers and Sharing Ideas and Strategies

Promoting District and School Development
59. Adhering to District and School Rules and Procedures
60. Participating in District and School Initiatives

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