Learning Sciences International

LEARNING AND PERFORMANCE MANAGEMENT

Dr. Robert Marzano's Evaluation Model Alignment to Washington State's Teacher Evaluation Pilot Criteria

Exclusive partners with Dr. Robert J. Marzano for the Causal Teacher Evaluation Model

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Preface

Recent federal initiatives (Race to the Top) and state legislation have called for rigorous, transparent, and fair evaluation systems that differentiate teacher effectiveness based on student achievement as described by value-added models. Subsequently, there is an increased need for a teacher evaluation model that also includes a comprehensive robust, and research based description of teacher effectiveness that can be measured using observation protocols, classroom artifacts, portfolios, student work, and professional growth plans.

The goal of an effective evaluation system is for teachers to incrementally increase their expertise in teaching year to year and, therefore, incrementally increase their ability to raise student learning gains year to year. Dr. Marzano's Causal Teacher Evaluation Model (*herein referred to as the Marzano Evaluation Model*) is based on his acclaimed Art and Science of Teaching Framework, which identifies the instructional strategies identified by research to increase student learning gains. The Marzano Evaluation Model closely aligns with state teaching standards through the development of clear criteria for success and a mechanism (student data module) that ties student achievement to teacher evaluation using data closest to the classroom.

Washington's Criteria for Effective Teaching broadly describe what teachers need to know and be able to do while the Marzano Evaluation Model provides a means for teachers translate the standards into their daily practice.

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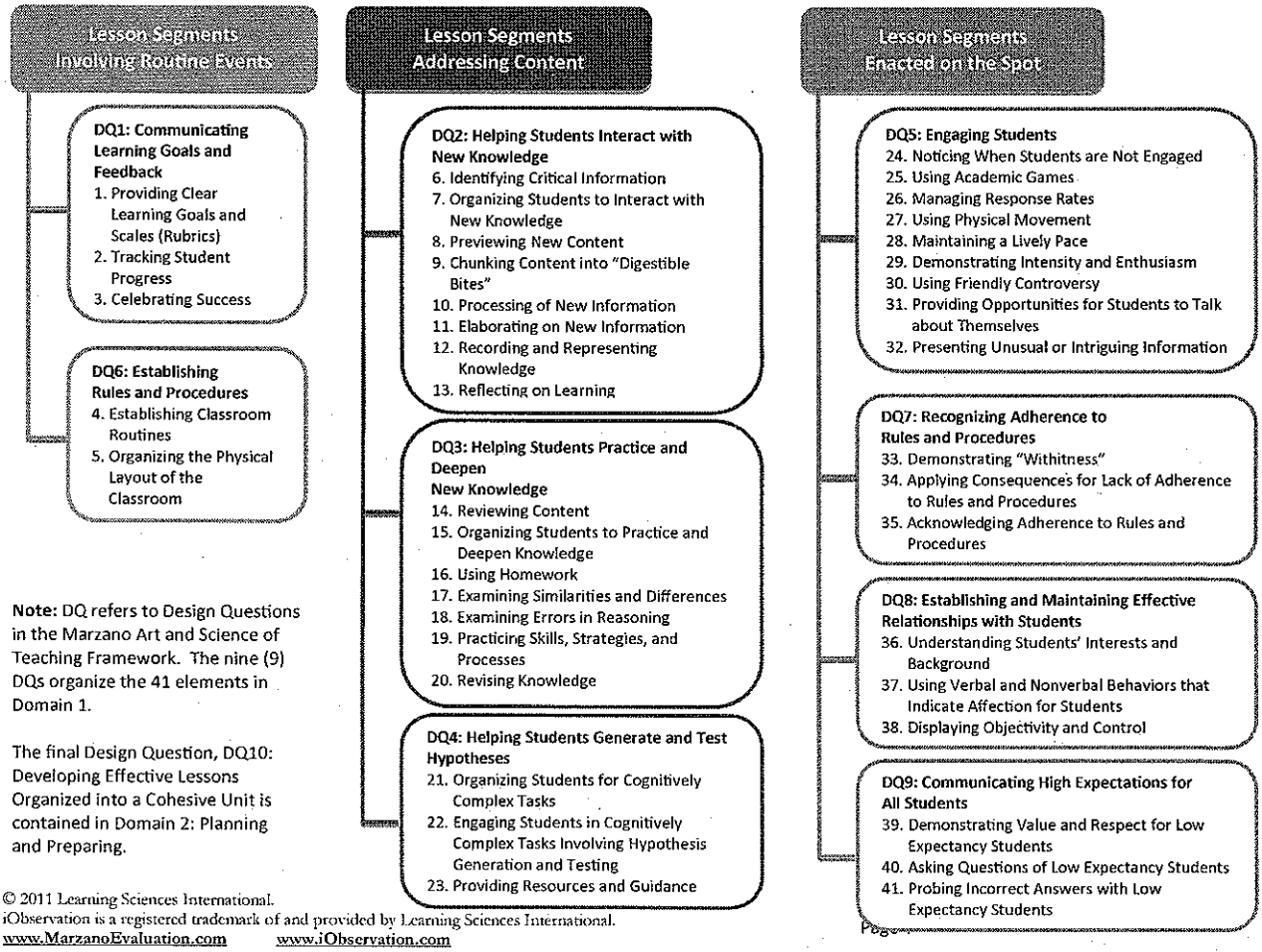
Domain 1: Classroom Strategies and Behaviors



Note: DQ refers to Design Questions 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.

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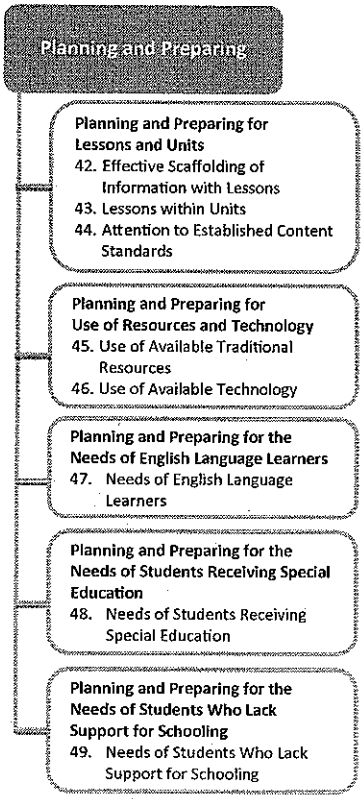
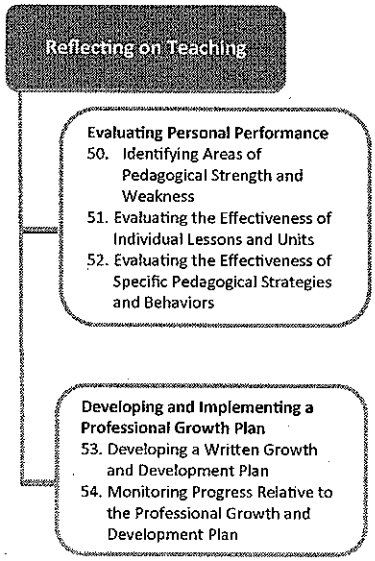
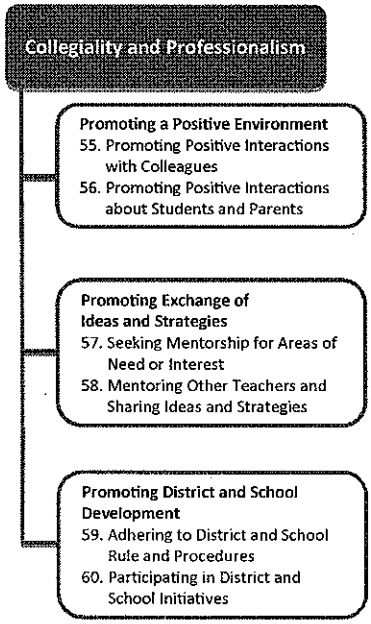
Domain 2: Planning and Preparing



Domain 3: Reflecting on Teaching



Domain 4: Collegiality and Professionalism



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Washington State's Teacher Evaluation Pilot Criteria Alignment to Dr. Marzano's Evaluation Model

Marzano Evaluation Model Domains 1, 2, 3, and 4	Washington Teacher Evaluation Criteria
DOMAIN 1: CLASSROOM STRATEGIES AND BEHAVIORS	
I. Lesson Segments Involving Routine Events	
Design Question #1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?	
1. Providing Clear Learning Goals and Scales (Rubrics)	Criteria 1 Criteria 2 Criteria 3 Criteria 4 Criteria 6
2. Tracking Student Progress	
3. Celebrating Success	
Design Question #6: What will I do to establish and maintain classroom rules and procedures?	
4. Establishing Classroom Routines	Criteria 5
5. Organizing the Physical Layout of the Classroom	
II. Lesson Segments Addressing Content	
Design Question #2: What will I do to help students effectively interact with new knowledge?	
6. Identifying Critical Information	Criteria 1 Criteria 2 Criteria 3 Criteria 4
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	
Design Question #3: What will I do to help student practice and deepen their understanding of new knowledge?	
14. Reviewing Content	Criteria 1 Criteria 2 Criteria 3 Criteria 4
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	
Design Question #4: What will I do to help students generate and test hypotheses about new knowledge?	
21. Organizing Students for Cognitively Complex Tasks	Criteria 1 Criteria 2 Criteria 3 Criteria 4
22. Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generation and Testing	
23. Providing Resources and Guidance	

III. Lesson Segments Enacted on the Spot	
Design Question #5: What will I do to engage students?	
24. Noticing When Students are Not Engaged	Criteria 1 Criteria 2 Criteria 3 Criteria 4
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	
Design Question #7: What will I do to recognize and acknowledge adherence or lack of adherence to rules and procedures?	
33. Demonstrating "Withitness"	Criteria 1 Criteria 2 Criteria 3 Criteria 4 Criteria 5
34. Applying Consequences for Lack of Adherence to Rules and Procedures	
35. Acknowledging Adherence to Rules and Procedures	
Design Question #8: What will I do to establish and maintain effective relationships with students?	
36. Understanding Students' Interests and Background	Criteria 1 Criteria 2 Criteria 3 Criteria 4 Criteria 5
37. Using Verbal and Nonverbal Behaviors that Indicate Affection for Students	
38. Displaying Objectivity and Control	
Design Question #9: What will I do to communicate high expectations for all students?	
39. Demonstrating Value and Respect for Low Expectancy Students	Criteria 1 Criteria 2 Criteria 3 Criteria 4 Criteria 5
40. Asking Questions of Low Expectancy Students	
41. Probing Incorrect Answers with Low Expectancy Students	
DOMAIN 2: PLANNING AND PREPARING	
I. Planning and Preparing for Lessons and Units	
42. Effective Scaffolding of Information with Lessons	Criteria 1 Criteria 3 Criteria 4 Criteria 6
43. Lessons within Units	
44. Attention to Established Content Standards	
II. Planning and Preparing for Use of Resources and Technology	
45. Use of Available Traditional Resources	Criteria 1 Criteria 4
46. Use of Available Technology	

III. Planning and Preparing for Needs of English Language Learners	
47. Needs of English Language Learners	Criteria 1 Criteria 3 Criteria 4 Criteria 5
IV. Planning and Preparing for Needs of Students Receiving Special Education	
48. Needs of Students Receiving Special Education	Criteria 1 Criteria 3 Criteria 4 Criteria 5
V. Planning and Preparing for Needs of Students Who Lack Support for Schooling	
49. Needs of Students Who Lack Support for Schooling	Criteria 1 Criteria 3 Criteria 4 Criteria 5
DOMAIN 3: REFLECTING ON TEACHING	
I. Evaluating Personal Performance	
50. Identifying Areas of Pedagogical Strength and Weakness	Criteria 6
51. Evaluating the Effectiveness of Individual Lessons and Units	
52. Evaluating the Effectiveness of Specific Pedagogical Strategies and Behaviors	
II. Developing and Implementing a Professional Growth Plan	
53. Developing a Written Growth and Development Plan	Criteria 6
54. Monitoring Progress Relative to the Professional Growth and Development Plan	Criteria 8
DOMAIN 4: COLLEGIALITY AND PROFESSIONALISM	
I. Promoting a Positive Environment	
55. Promoting Positive Interactions with Colleagues	Criteria 7
56. Promoting Positive Interactions about Students and Parents	Criteria 8
II. Promoting Exchange of Ideas and Strategies	
57. Seeking Mentorship for Areas of Need or Interest	Criteria 7
58. Mentoring Other Teachers and Sharing Ideas and Strategies	Criteria 8
III. Promoting District and School Development	
59. Adhering to District and School Rule and Procedures	Criteria 8
60. Participating in District and School Initiatives	

Washington State's Teacher Evaluation Pilot Criteria

Teacher Evaluation Criteria	Criteria Definitions
1. Centering instruction on high expectations for student achievement.	**PLANNING**: The teacher sets high expectations through instructional planning and reflection aligned to content knowledge and standards. Instructional planning is demonstrated in the classroom through student engagement that leads to an impact on student learning.
2. Demonstrating effective teaching practices.	**INSTRUCTION**: The teacher uses research-based instructional practices to meet the needs of ALL students and bases those practices on a commitment to high standards and meeting the developmental needs of students.
3. Recognizing individual student learning needs and developing strategies to address those needs.	**REFLECTION**: The teacher acquires and uses specific knowledge about students' individual intellectual and social development and uses that knowledge to advance student learning.
4. Providing clear and intentional focus on subject matter content and curriculum.	**CONTENT KNOWLEDGE**: The teacher uses content area knowledge and appropriate pedagogy to design and deliver curricula, instruction, and assessment to impact student learning.
5. Fostering and managing a safe, positive learning environment.	**CLASSROOM MANAGEMENT**: The teacher fosters and manages a safe, culturally sensitive, and inclusive learning environment that takes into account: physical, emotional, and intellectual well-being.
6. Using multiple student data elements to modify instruction and improve student learning.	**ASSESSMENT**: The teacher uses multiple data elements (both formative and summative) for planning, instruction, and assessment to foster student achievement.
7. Communicating and collaborating with parents and school community.	**PARENTS AND COMMUNITY**: The teacher communicates and collaborates with students, parents and all educational stakeholders in an ethical and professional manner to promote student learning.
8. Exhibiting collaborative and collegial practices focused on improving.	**PROFESSIONAL PRACTICE**: The teacher participates collaboratively in the educational community to improve instruction, advance the knowledge and practice of teaching as a profession, and ultimately impact student learning.

Research Base and Validation Studies on the Marzano Evaluation Model, April 2011

Research Base and Validation Studies on the Marzano Evaluation Model[1]

The Marzano Evaluation Model is currently being used by the Florida Department of Education (DOE) as a model that districts can use or adapt as their evaluation model. That Marzano Evaluation Model is based on a number of previous, related works that include: *What Works in Schools* (Marzano, 2003), *Classroom Instruction that Works* (Marzano, Pickering, & Pollock, 2001), *Classroom Management that Works* (Marzano, Pickering, & Marzano, 2003), *Classroom Assessment and Grading that Work* (Marzano, 2006), *The Art and Science of Teaching* (Marzano, 2007), *Effective Supervision: Supporting the Art and Science of Teaching* (Marzano, Frontier, & Livingston, 2011). Each of these works was generated from a synthesis of the research and theory. Thus the mode can be considered an aggregation of the research on those elements that have traditionally been shown to correlate with student academic achievement. The model includes four domains:

Domain 1: Classroom Strategies and Behaviors
Domain 2: Preparing and Planning
Domain 3: Reflecting on Teaching
Domain 4: Collegiality and Professionalism

The four domains include 60 elements: 41 in Domain 1, 8 elements in Domain 2, 5 elements in Domain 3 and 6 elements in Domain 4. For a detailed discussion of these elements see *Effective Supervision: Supporting the Art and Science of Teaching* (Marzano, Frontier, & Livingston, 2011).

Domain 1 contains 41 elements (5 + 18 +18); **Domain 2** contains 8 elements (3 + 2+ 3); **Domain 3** contains 5 elements (3 +2) and **Domain 4** contains 6 elements (2 + 2 + 2). Given that 41 of the 60 elements in the model are from Domain 1, the clear emphasis in the Marzano model is what occurs in the classroom—the strategies and behaviors teachers use to enhance student achievement. This emphasis differentiates it from some other teacher evaluation models.

Teacher status and growth can be assessed in each component of the model in a manner that is consistent with the Florida DOE guidelines and the requirements of Race to the Top legislation.

The Research Base from Which the Model Was Developed

Each of the works (cited above) from which the model was developed report substantial research on the elements they address. For example, *The Art and Science of Teaching* includes over 25 tables reporting the research on the various elements of Domain 1. These tables report the findings from meta-analytic studies and the average effect sizes computed in these studies. In all, over 5,000 studies (i.e., effect sizes) are covered in the tables representing research over the last five decades. The same can be said for the other titles listed above. Thus, one can say that the model was initially based on thousands of studies that span multiple decades and these studies were chronicled and catalogued in books that have been widely disseminated in the United States. Specifically, over 2,000,000 copies of the books cited above have been purchased and disseminated to K-12 educators across the United States.

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Experimental/Control Studies

Perhaps one of the more unique aspects of the research on this model is that it has a growing number of experimental/control studies that have been conducted by practicing teachers on the effectives of specific strategies in their classrooms. This is unusual in the sense that these studies are designed to establish a direct causal link between elements of the model and student achievement. Studies that use correlation analysis techniques (see next section) can establish a link between elements of a model and student achievement; however, causality cannot be easily inferred. Other evaluation models currently used throughout the country only have correlational data regarding the relationship between their elements and student achievement.

To date over 300 experimental/control studies have been conducted. Those studies involved over 14,000 students, 300 teachers, across 38 schools in 14 districts. The average effect size for strategies addressed in the studies was .42 with some studies reporting effect sizes of 2.00 and higher. An average effect size of .42 is associated with a 16 percentile point gain in student achievement. Stated differently: on the average, when teachers use the classroom strategies and behaviors in the Marzano Evaluation Model, their typical student achievement increased by 16 percentile points. However, great gains (i.e., those associated with an effect size of 2.00) can be realized if specific strategies are use in specific ways.

Correlational Studies

As mentioned above, correlational studies are the most common approach to examining the validity of an evaluation model. Such studies have been, and continue to be conducted, on various elements of the Marzano Evaluation Model. For example, such study was recently conducted in the state of Oklahoma as a part of their examination of elements that are related to student achievement in K-12 schools (see *What Works in Oklahoma Schools: Phase I Report* and *What Works in Oklahoma School: Phase II* Report, by Marzano Research Laboratory, 2010 and 2011 respectively). Those studies involved 59 schools, 117 teachers, and over 13,000 K-12 students. Collectively, those reports indicate positive relationships with various elements of the Marzano Evaluation Model across the domains. Specific emphasis was placed on Domain 1 particularly in the Phase II report. Using state mathematics and reading test data, 96% of the 82 correlations (i.e., 41 correlations for mathematics and 41 for reading) were found to be positive with some as high as .40 and greater. A .40 correlation translates to an effect size (i.e., standardized mean difference) of .87 which is associated with a 31 percentile point gain in student achievement. These studies also aggregated data across the nine design questions in Domain 1. All correlations were positive for this aggregated data. Seven of those correlations ranged from .33 to .40. These correlations translate into effect sizes of .70 and higher. High correlations such as these were also reported for the total number of Domain 1 strategies teachers used in a school. Specifically the number of Domain 1 strategies teachers used in school had a .35 correlation with reaching proficiency and a .26 correlation with mathematics proficiency.

Technology Studies

Another unique aspect of the research conducted on the model is that its effects have been examined in the context of technology. For example, a two year study was conducted to determine (in part) the relationship between selected elements from Domain 1 and the effectiveness of interactive whiteboards in enhancing student achievement (see *Final Report: A Second Year Evaluation Study of Promethean ActivClassroom* by Haystead and Marzano, 2010). In all, 131 experimental/control studies were conducted across the spectrum of grade levels. Selected elements of Domain 1 were correlated with the effect sizes for use of the interactive white boards. All correlations for Domain 1 elements were positive

with some as high as .70. This implies that the effectiveness of the interactive whiteboards as used in these 131 studies was greatly enhanced by the use of Domain 1 strategies.

Summary

In summary, the Marzano Evaluation Model was designed using literally thousands of studies conducted over the past five or more decades and published in books that have been widely used by K-12 educators. In addition, experimental/control studies have been conducted that establish a more direct causal linkages with enhanced student achievement that can be made with other types of data analysis. Correlation studies (the more typical approach to examining the viability of a model) have also been conducted indicating positive correlations between the elements of the model and student mathematics and reading achievement. Finally, the model has been studied as to its effects on the use of technology (i.e., interactive whiteboards) and found it to be highly correlated with the effectiveness of that technology.

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