



Guidance in Reading Selected Research Documents Regarding the Marzano Teacher Evaluation Model

Eleven separate documents relating to the Marzano Teacher Evaluation Model are provided in the link accompanying this document:

1. Marzano, Robert J., Schooling, P., and Toth, M. (2012). *Contemporary Research Base for the Marzano Causal Teacher Evaluation Model, a Summary*.
2. Haystead, Mark W., & Marzano, Robert J., (2009). *Meta-analytic Synthesis of Studies Conducted at Marzano Research Laboratory on Instructional Strategies*.
3. Haystead, Mark W., & Marzano, Robert J., (2010). *Final Report: A Second Year Evaluation Study of Promethean ActivClassroom*.
4. Marzano Research Laboratory (2009). *Meta-Analysis Database*.
5. Marzano Research Laboratory. (2010). *Report on Professional Development: A Summary of Findings for Ten Teachers on Three Critical Commitments to School Reform*.
6. Marzano Research Laboratory. (2010). *Phase I – What Works in Oklahoma Schools*.
7. Marzano Research Laboratory. (2010). *Phase II – What Works in Oklahoma Schools*.
8. Marzano Research Laboratory. (2011). *2010-2011 The Adams 50 Instructional Model Study: Individual Teacher Effectiveness Linked to Student Growth*.
9. Marzano Research Laboratory. (2011). *Phase III – What Works in Oklahoma Schools*.
10. Marzano Research Laboratory. (2011). *Reliability Study: Rockwall Independent School District Observational Protocol*.
11. Marzano Research Laboratory. (2011). *Reliability Study: Cherry Creek School District Observational Protocol*.

This document is intended as a guide to readers who wish to examine studies that directly or indirectly have examined the Marzano Teacher Evaluation Model.

The first entry, *Contemporary Research Base for the Marzano Causal Teacher Evaluation Model, a Summary*, is an overview of the research in these documents and others. It is intended to provide the reader with an overview of the research on the model along with a brief discussion of the philosophy underlying the model.

The second entry, *Meta-analytic Synthesis of Studies Conducted at Marzano Research Laboratory on Instructional Strategies*, contains a meta-analytic review of the 329 quasi-experimental studies (experimental/control studies using intact groups) on various instructional strategies that are components of the model. These studies were conducted between 2004 and 2009 by teachers utilizing different aspects of the model. The executive summary provides a quick review of these studies but a more thorough reading of the entire document reports the average effects sizes (standardized mean differences) of specific types of strategies and examines the effects of instructional strategies in the model across different grade levels. Since the Marzano Teacher Evaluation Model is designed to help teachers improve their effectiveness in the classroom by cultivating the use of new strategies, this type of research might be considered particularly germane. It indicates that under the proper circumstances, teacher can enhance the achievement of their students by utilizing new strategies gleaned from the model.

The fourth entry listed above, *Meta-Analysis Database*, is a direct link to a data base housed at Marzano Research Laboratory of over 1,000 effect sizes computed for quasi-experimental studies on specific strategies within the model like those summarized in the second entry (*Meta-analytic Synthesis of Studies*). Where the meta-analytic synthesis document described above covers only those studies done through 2009, the meta-analytic database is kept more current and contains all data necessary for independent researchers to conduct their own meta-analytic syntheses regarding strategies in the Marzano Teacher Evaluation Model. In effect, studies continue to be done with classroom teachers examining and documenting the effect of use of specific instructional strategies in the model.

Entry three above, *Final Report: A Second Year Evaluation Study of Promethean ActivClassroom*, is a report on a two-year study of the effects of teacher use of Promethean Interactive Whiteboards (IWBs)

on student achievement. While this study was not directed specifically toward the Marzano Teacher Evaluation Model, it did involve elements from the model. Specifically, pages 38-68 report the results of an analysis of classroom videotapes of teachers using the technology versus not using the technology while teaching the same content. These tapes were scored for use of specific strategies in the Marzano Teacher Evaluation Model (see evaluation questions 7-17 articulated on pages 39-40), and then analyzed in terms of the mediating influences these strategies had on the effects of the Promethean IWB. As reported on pages 49-68, these instructional strategies had relatively strong correlations with standardized mean difference effect sizes computed for use of the Promethean IWB. This indicates that when used in specific ways, the strategies in the model can enhance the effects of IWB technology.

The fifth entry above, *Report on Professional Development: A Summary of Findings for Ten Teachers on Three Critical Commitments to School Reform*, provides a summary of a study of 10 teachers in a school that serves a majority of Native American students. The school received professional development in a number reform initiatives (collectively referred to as “critical commitments”) promoted by Marzano Research Laboratory. A major aspect of the critical commitments is use of the Art and Science of Teaching model which is the basis for the Marzano Teacher Evaluation Model. The differential use of the commitments was examined across 10 teachers and correlated with state test scores. Figure 16 on page 10 reports correlations with different commitments (including the Art and Science of Teaching) and students’ mathematics and reading scores.

Entries six, seven, and nine above all relate to a study conducted in the State of Oklahoma referred to as What Works in Oklahoma Schools.

- *Phase I – What Works in Oklahoma Schools*
- *Phase II – What Works in Oklahoma Schools*
- *Phase III – What Works in Oklahoma Schools*

As is the case with the Promethean report, this study was not focused on the Marzano Teacher Evaluation Model per se, but the model was used as a significant set of variables within the study. Specifically, while the overarching focus of the study was the extent to which the “nine essential elements” identified by the Oklahoma Department of Education (OSDE) discriminated well between

matched schools that were deemed as needing improvement and those that were not, a number of these essential elements were examined using specific components of the Marzano Teacher Evaluation Model.

To illustrate, in the Phase I report, the OSDE essential element of instruction was examined using questions designed around the Marzano Framework (see figures 7-9 found on pages 7-15). Where Phase I of the study was conducted using surveys of students, teachers, administrators, and parents, Phase II involved direct observation of teachers (via live and video-based classroom visits). Figures 11-20 (found on pages 13-27 of the Phase II report), provide correlations with various aspects of the Marzano Model and student achievement on state tests. The Phase III report does not articulate study results. Rather, it contains recommendations to schools in Oklahoma based on the study and tools necessary to implement those recommendations. The Phase III report is offered only as an example of the various ways the Marzano Teacher Evaluation Model has been used throughout the country. Quite frequently, schools and districts use tools developed at Marzano Research Laboratory to adapt elements of the Marzano Teacher Evaluation Model to their specific needs.

The eighth entry listed above, *The Adams 50 Instructional Model Study*, reports on a study conducted in a standards-based school district that utilizes the Marzano Model with adaptations for standards-based instruction. Starting on page 31 of the report, correlations are reported for use of the model (as measured by teacher survey and direct observation of teachers using video-recordings) and status and gain scores (VAMs) from state and district assessments.

The tenth and eleventh entries above are both reports of reliability studies conducted in two different districts that are using the Marzano Model as their official language of instruction. Both studies involved multiple raters and multiple lessons.

It is important to note that the studies provided here do not include a good number of other studies that support the model. For example, the Marzano Teacher Evaluation Model established its content validity via a series of literature reviews regarding three general aspects of classroom pedagogy:

instructional strategies, management strategies, and assessment strategies. Those reviews included over 5,000 effect sizes from studies that span about five decades (Marzano, Robert, J., 2007, *The Art and Science of Teaching*).

The construct validity for the Marzano Model has been established in a series of factor analytic studies conducted since 2005. The first factor analytic study was conducted in conjunction with ASCD within the context of the comprehensive model for school reform entitled *What Works in Schools* (Marzano, 2003). That model identified 11 factors, within three broad categories of variables: school-level variables, classroom-level (i.e. teacher) variables, and student variables. A 68-item survey was developed and administered to over 66,000 teachers across the United States regarding the use of specific strategies and frequency of specific teacher behaviors in their schools. Of those 68 items, 36 addressed those classroom behaviors which eventually became Domain 1 (Classroom Strategies and Behaviors) of the Marzano Teacher Evaluation Model. The 66,000 teacher responses were subjected to a principal component factor analysis with a varimax rotation. Eleven separate factors were extracted that accounted for 61% of the variance in responses. Of those 11 factors one clearly delineated Domain 1 of the Marzano Model as distinct from school-level and student-level factors. A second factor delineated Segment 2 (content instruction) of Domain 1 as distinct from Segment 1 (routines) and Segment 3 (on-the-spot strategies and behaviors). A third factor clearly delineated the focus on Segment 1 (routines) on clear learning goals and tracking student progress as a distinct factor.

Since this initial factor analysis, others have been done using classroom observational data. For example, as an aspect of the study of classroom instruction in Adams 50 school district in Colorado, a principal component factor analysis with a varimax rotation was conducted on data from observations of more than 80 teachers. Two factors that accounted for 68% of the variance emerged from the analysis regarding Domain 1 of the Marzano Teacher Evaluation Model. One factor included Segment 2 (content) of Domain 1 along with the focus on Learning Goals from Segment 1 and Student Engagement from Segment 3. The second factor was comprised of three of the four elements in Segment 3 (on-the-spot strategies). A factor analysis of teacher survey responses provided a clearer factor structure in which Segment 3 (on-the-spot strategies) emerged as distinct.



Finally, while the Marzano Model has been used in different forms as a “language of instruction” in schools and districts across the country for at least a decade, it is relatively new to the official world of teacher evaluation. Consequently, it has not been the focus of third party analysis simply because it has been used as an official teacher evaluation model for two years only. In conjunction with the Marzano Center for Teacher and Leadership Evaluation, efforts are being made to collect and elicit third party research on the model. As dissertations are completed that directly or indirectly address the model, they will be posted and discussed on the Center’s website. To date, one dissertation has been sent to the Center comparing the Marzano model with the Danielson model in terms of its effect on teacher practice. This dissertation will be posted as soon as the author has made his final defense of the study.

Additionally, representatives from The Bill and Melinda Gates Foundation have tentatively agreed to support a third party, small-scale study of the Marzano Model using the same videos as were used in the MET study (Measures of Effective Teaching). Finally, a relationship has been established between the Marzano Center and Florida Atlantic University to elicit third party studies of the model from graduate students completing their advanced degrees. In short, the next wave of studies on the Marzano Teacher Evaluation Model should contain a fair number of third party studies.

To read the studies addressed in this report, click here:

<http://www.marzanocenter.com/Teacher-Evaluation-Resources/research-reports-MTE-model/>