



DATA-INFORMED DECISION-MAKING ON HIGH-IMPACT STRATEGIES

A Measurement Tool for School Principals

Aligned With Michigan Department of Education's Michigan School Improvement Framework

Produced by Michigan Coalition of Educational Leadership, A State Action Educational Leadership Project on Data-Informed Decision-Making Funded by The Wallace Foundation



DATA-INFORMED DECISION-MAKING ON HIGH-IMPACT STRATEGIES

A Measurement Tool for School Principals

Principals should respond to each item. The items for each subscale should then be averaged. The 11 subscale scores provide a basis for improving principalship in using data for the high-impact strategies.

Please indicate to which extent you engage in the following activities:

1- not at all
2- very little
3- somewhat
4- to a great extent

1. Tracking the identification, organization, and sequencing of the district essential curriculum	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Guaranteed and Viable Curriculum	_____
2. Monitoring communication of the district essential curriculum expectations	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
3. Tracking allocation of time for students to learn the essential curriculum	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
4. Establishing specific goals for individual students	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		_____
5. Providing timely feedback on student progress through aligned classroom assignments	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Challenging Goals and Effective Feedback	
6. Developing specific, challenging school goals	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
7. Frequent monitoring on progress toward school goals	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		_____
8. Monitoring frequency of communications between school and parents	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Parent and Community Involvement	
9. Monitoring quality of communications between school and parents	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
10. Monitoring communication of the district essential curriculum expectations	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
11. Tracking parent and community involvement in school activities	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		_____
12. Tracking parent and community involvement in school governance	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Safe and Orderly Environment	
13. Tracking student behavior patterns to establish school-wide behavior expectations	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
14. Early detection of violent and extreme behavior	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
15. Monitoring effectiveness of consequences for inappropriate student behavior	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		_____
16. Monitoring evidence of self-discipline and personal responsibility	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Collegiality and Professionalism	
17. Tracking teacher collegiality and professionalism	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
18. Monitoring teacher involvement in school decision-making processes	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
19. Tracking teacher engagement in and effectiveness of professional development	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		_____
20. Monitoring the development of a shared professional vocabulary for teaching and learning	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Instructional Strategies	
21. Monitoring units of instruction for employment of research-based strategies	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
22. Monitoring adaptation of classroom instruction to meet individual student needs	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
23. Monitoring teacher utilization of instructional strategies that work	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		_____
24. Monitoring the establishment of consistent classroom rules and effective classroom routines	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Classroom Management	
25. Monitoring the effectiveness of classroom behavior interventions with diverse students	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
26. Monitoring the quality of teacher/student relationships	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		



			<i>1- not at all 2-very little 3-somewhat 4-to a great extent</i>
27. Tracking teacher clarity on the goals of instruction	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Classroom Curriculum Design	_____ ▶
28. Monitoring the presentation of new content in multiple learning modes	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
29. Tracking teacher organization of knowledge, skills, and content to facilitate learning	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
30. Tracking engagement of students in complex tasks involving higher cognitive processes	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
31. Tracking parent communication with their children about school	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Home Environment	_____ ▶
32. Tracking parent support for learning in the home environment	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
33. Tracking evidence of parent supervision	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
34. Tracking parent communicated expectations for their children	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Learned Intelligence	_____ ▶
35. Tracking student experiences in and out of school	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
36. Tracking student reading patterns for breadth and depth	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
37. Tracking student vocabulary development	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
38. Monitoring direct instruction on vocabulary and phrases important to specific subject matter	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for Student Motivation	_____ ▶
39. Monitoring feedback to students on learning achievements	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
40. Tracking learning activities for levels of student engagement	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
41. Tracking student opportunities to construct and work on long-term projects of their own design	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
42. Tracking student understanding of personal motivation and efficacy	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Average for the Whole Instrument	_____ ▶

Contact Information:

Dr. Jianping Shen
 The John E. Sandberg Professor of Education
 College of Education
 Western Michigan University
 Kalamazoo, Michigan 49008
 Phone: 269-387-3887
 Email: shen@wmich.edu

BASIC INFORMATION ABOUT THE INSTRUMENT

What does the instrument measure?

The instrument measures the extent to which principals engage in data-informed decision-making in relation to 11 high-impact strategies which are synthesized by Marzano (2003) and are positively correlated with student achievement. The 11 high-impact strategies (i.e., subscales) are shown in Table 1.

What is the instrument's reliability?

Based on a sample of 258 principals, the data indicate the instrument has a high level of reliability for all the subscales as well as for the whole instrument.

Table 1. Reliability Statistics for Subscales and the Whole Instrument

Subscale	Number of Items	Alpha
Guaranteed and viable curriculum (Items 1–4)	4	0.91
Challenging goals and effective feedback (Items 5–8)	4	0.91
Parent and community involvement (Items 9–12)	4	0.92
Safe and orderly environment (Items 13–16)	4	0.92
Collegiality and professionalism (Items 17–20)	4	0.91
Instructional strategies (Items 21–23)	3	0.90
Classroom management (Items 24–26)	3	0.91
Classroom curriculum design (Items 27–30)	4	0.96
Home environment (Items 31–34)	4	0.96
Learned intelligence (Items 35–38)	4	0.90
Student motivation (Items 39–42)	4	0.94
Questionnaire as a whole (Items 1–42)	42	0.98

What is the instrument's validity?

Confirmatory factor analyses through structural equation modeling indicate that the instrument has a high level of validity. Results in Table 2 indicated that the null model and one-factor model were poor fits to the data. Although the three-factor model represented an improvement in model-data-fit over the null and one-factor models, its indices fell seriously short of expected standards. However, the proposed eleven-factor model showed a very good fit across all indices. It had the smallest X^2 statistic, had both CFI and TLI greater than 0.90, and had a SRMR value smaller than 0.08. These indicated that each item on the questionnaire loaded significantly on the appropriate factor. In other words, all items proposed to measure, for example, “guaranteed and viable curriculum,” loaded significantly on this factor (or construct).

Table 2. Model-Data-Fit Indices*

Model	X^2	CFI	TLI	SRMR
Null model	9505.82	-	-	-
One-factor model	4088.35	0.62	0.60	0.10
Three-factor model**	3253.14	0.72	0.70	0.08
Eleven-factor model	1519.68	0.91	0.90	0.05

* CFI = comparative fit index. TLI = Tucker-Lewis index. SRMR = standardized root mean square residual.

** Based on the model that items 1–20 = school-level factors; items 21–30=teacher-level factor; and items 31–42=student-level factor.

How to use the instrument?

Principals should respond to each item. The items for each subscale should then be averaged. The 11 subscale scores provide a basis for improving principalship in using data for the high-impact strategies.

The development of this instrument was funded by The Wallace Foundation. The items were developed based on Marzano, R.J. (2003). *What Works in Schools*. Alexandria, VA: Association for Supervision and Curriculum Development. Both The Wallace Foundation and Association for Supervision and Curriculum Development are acknowledged.

Citation of the Instrument:

Shen, J., Cooley, V., Ma, X., Reeves, P., Burt, W., Rainey, M., & Yuan, W. (2007). *Data-Informed Decision-Making on High-Impact Strategies: A Measurement Tool for School Principals*. Kalamazoo, MI: Michigan Coalition of Educational Leadership.