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QUALITY SCHOOL LEADERSHIP IDENTIFICATION | TOOLBOX

TOOLBOX FOR DISTINGUISHING THE RIGHT LEADER FOR YOUR SCHOOL

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TOOLBOX FOR DISTINGUISHING THE RIGHT LEADER FOR YOUR SCHOOL

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Domain 3: Leading Learning	Candidate's Level of Performance in Each Area (0–4)	School's Weighted Priority for Each Area (1–3)	Candidate's Weighted Score for Each Area	Candidate's Total Weighted Score for the Domain	School's Weighted Priority for Each Domain (1–3)	Candidate's Final Score
Collaborative professional learning opportunities		x	=			
Rigorous curriculum		x	=			
Monitoring of student learning		x	=			
Monitoring the quality of teaching		x	=		x	
Allocation of instructional resources		x	=			
Community engagement		x	=			
Domain 4: Promoting and Maintaining a Safe and Effective Learning Environment	**Candidate's Level of Performance in Each Area (0–4)**	**School's Weighted Priority for Each Area (1–3)**	**Candidate's Weighted Score for Each Area**	**Candidate's Total Weighted Score for the Domain**	**School's Weighted Priority for Each Domain (1–3)**	**Candidate's Final Score**
Physical safety		x	=			
Emotional safety		x	=		x	
Cognitive safety		x	=			

Tool 8: Data Analysis Task With Answer Key

(Version for Task Facilitator)

Overview

Principals are required to interpret and use data to inform school management and instructional support. The Data Analysis Task is intended to provide the hiring committee with insights into areas of candidate strength and weakness with respect to analyzing and using data to inform instructional leadership decisions. During this activity, a candidate is asked to review three scenarios and react to several short-answer questions. The scenarios in this activity have been adapted from a set of scenarios used by Means, Padilla, DeBarger, and Bakia (2009), who created a validated instrument for assessing teacher capabilities to make data-based instructional decisions.

The Data Analysis Task has two versions: one for the task facilitator (Tool 8, which contains an answer key) and another for candidates (Tool 11). This version of the activity, aimed at the task facilitator, describes what a candidate needs to complete the task and provides rubrics for grading the candidate responses.

You also may use these data as the basis for a simulated presentation by a candidate. If you choose this approach, ask each candidate to construct and make a 10-minute presentation of the data and indicate his or her understanding of trends and issues within the data. Principals are routinely asked to discuss performance data with school board members, faculty, and parents. Such a presentation helps the hiring committee to assess a candidate's communication skills (see QSL-ID Domain 1 in **Tool 2: QSL-ID Rubrics**).

Candidate Activities

Each candidate will review the three scenarios and respond to several questions. Scenario A asks the candidate to determine which data should be used for instructional planning. Scenario B asks the candidate to read a data table and interpret the data. Scenario C asks the candidate to interpret a bar graph and respond to questions. All questions have accompanying scoring rubrics.

The hiring committee also may require each candidate to do a short presentation of the school data to a constituent group. If the committee has chosen this option, discuss this requirement with the candidate, assist him or her with any technology needed for the presentation (e.g., presentation software, projector, microphone), and tell him or her about the intended audience (e.g., concerned parents, faculty members).

Facilitator Activities

All candidates should have the same opportunities to respond to multiple-choice questions:

- Use **Tool 11: Data Analysis Task (Version for Candidates)** for each candidate. This version has a blank area for candidate responses.
- Allot 45 minutes for each candidate to complete the multiple-choice questions.
- Give the candidate a quiet space in which to work.
- Ensure that the candidate has access to a calculator, which is helpful in analyzing the data.
- Ensure that you have a strong understanding of the data tasks and are prepared to answer questions.
- Be on hand to answer candidates' clarifying questions about the task or questions, but do not assist them in interpreting scenarios. The scenarios provide adequate information for candidates to complete the assessment.

After a candidate has completed the task, collect the completed Tool 11, review the responses, and assign points to responses by comparing the candidate's responses to the rubrics in **Tool 8: Data Analysis Task With Answer Key (Version for Task Facilitator)**. Record the scores on **Tool 9: Data Analysis Task Scoring Form**. After you complete the review, place both Tool 9 and Tool 11 into the candidate's folder. Results will be used by the hiring committee when making determinations about finalists.

If the committee also is requiring candidates to construct and deliver a presentation, allot an additional 30 minutes for preparation time as well as 30 minutes for the actual presentation. Budgeting 30 minutes for the presentation allows you to set up the presentation, have the candidate speak for 10 to 15 minutes, and allow time for some audience questions.

Tool 8: Data Analysis Task With Answer Key

(Version for Task Facilitator)

Scenario A: Using Data for Instructional Planning

You are leading a middle school in which seventh graders' performance on the state mathematics test last year was relatively low. Your school subscribes to a computer-based student data system, which can generate multiple grade-level data for the school and district. For each student, the system has the following information:

- Scores on previous years' state standardized assessments (Grades 3, 5, 7, 9, 11)
- Scores on another annual standardized assessment
- Subject-area report card grades
- Ethnicity
- Gender
- Free or reduced-price lunch status

The student database gathers and reports individual student record data per year. Educators can examine individual student data over time and performance by subgroup (e.g., gender type, grade level).

QUESTION A.1. To help you understand the seventh graders' low performance on the state test, the computer-based data system can provide you with student data from every grade in your school. What data queries would you ask of the system to help you understand the scope and nature of problems and determine courses of action to improve the seventh graders' performance? Be specific about the types of student information that you want to see, and explain your choices.

Scoring Rubric:

2: Candidate picks a logical group (either previous year's seventh graders or current seventh graders) **AND** selects a logical measure for that group (either Grade 6 state test scores or Grade 7 district fall test scores for current seventh graders).

1: Candidate picks a logical group (either previous year's seventh graders or current seventh graders) **OR** candidate selects a logical measure for that group (either Grade 6 state test scores or Grade 7 district fall test scores for current seventh graders).

0: Incorrect **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

QUESTION A.2. What additional information would you like to gather in order to identify problems with Grade 7 student learning in mathematics?

Scoring Rubric:

2: Candidate names one or more queries that can be run **AND** the choice of queries is logical in that it pertains to student data and performance **AND** the candidate explains why the data from those queries will be important.

1: Candidate names one or more queries that can be run **OR** the choice of queries is logical in that it pertains to student data and performance **OR** the candidate explains why the data from those queries will be important.

0: Incorrect **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

QUESTION A.3. After you have a better understanding about the scope and nature of student learning issues in Grade 7 mathematics, how would you proceed to make a change in the school?

Scoring Rubric:

2: Candidate logically and coherently discusses how he or she will engage staff, in small groups or as a whole, in reviewing and discussing data **AND** discusses the importance of gathering more information about instructional and curriculum quality.

1: Candidate discusses the importance of involving teachers in instructional decision making, but the plan does not include gathering information about instructional or curriculum quality. The plan is otherwise logical and coherent.

0: Candidate does not know or does not respond **OR** the plan lacks a logical explanation or is incoherent.

Scenario B: Interpreting Data

Table 1 is the kind of data table produced by some student data systems. This table displays Grade 7 student mathematics data, broken down by gender, ethnicity, and proficiency level. An additional notable factor is that all Grade 7 students (100 percent) in this school were tested.

Table 1. Grade 7 (Middle School) Mathematics Student Data

Gender	Ethnicity	# of Students Tested	% of Tested Students	Mean Scale Score	Number Students at Each Proficiency Level			
					Below Basic	Basic	Proficient	Advanced
Female	American Indian	12	5%	458	2	5	3	2
	Asian/Pacific Islander	7	3%	482	1	2	2	2
	African American	24	10%	478	5	12	4	3
	Hispanic	95	40%	465	20	34	25	16
	Caucasian	100	42%	468	22	33	23	22
	Total Female	238	100%	468	50	86	57	45
Male	American Indian	5	2%	489	2	2	1	0
	Asian/Pacific Islander	7	3%	495	0	2	4	1
	African American	15	6%	462	2	6	4	3
	Hispanic	110	44%	470	23	36	31	20
	Caucasian	109	45%	501	22	37	30	20
	Total Male	246	100%	478	49	83	70	44

Following are some questions about how you would interpret the data in this table.

QUESTION B.1. Suppose that you are working with Grade 7 teachers at this school and they are interested in examining how their students performed in terms of the mathematics skills measured on this test. What do the data in Table 1 indicate about whether boys and girls performed differently in Grade 7?

Scoring Rubric:

2: Candidate mentions the 10-point difference in mean scores between boys' and girls' scores **AND** analyzes which group had more students performing below proficiency.

1: Candidate mentions the 10-point difference in mean scores between boys' and girls' scores **OR** analyzes which group had more students performing below proficiency.

0: Incorrect **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

QUESTION B.2. Following are a series of statements that a teacher might make about different aspects of the Grade 7 data in Table 1. For each statement, please indicate whether you agree or disagree with the teacher and the reasons why you came to that decision. Remember to provide your rationale as you write down your answer.

Statement 1: A majority of seventh graders at this school have not achieved proficiency in mathematics, as measured by this test. (Do you agree or disagree? Please explain your answer.)

Scoring Rubric:

2: Agree, with an explanation that 55 percent of students are less than "proficient" (268 [50+86+49+83] divided by 484 [238+246] = 55 percent).

1: Agree, but with no explanation or explanation is not logical.

0: Disagree **OR** candidate does not know **OR** scorer cannot conclude whether answer is correct or incorrect.

Statement 2: In Grade 7, boys were more likely than girls to score below basic on this assessment. (Do you agree or disagree? Please explain your answer.)

Scoring Rubric:

2: Disagree, with explanation that it is difficult to know if a 2 percent difference (21 percent of girls and 19 percent of boys scoring below basic) is meaningful.

1: Disagree (49 boys is almost equal to 50 girls), but with no explanation or explanation is not logical.

0: Agree **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

Statement 3: Of those students who scored below basic in Grade 7, most were Hispanic. (Do you agree or disagree? Please explain your answer.)

Scoring Rubric:

2: Disagree, with an explanation that it is an even split between Hispanic and Caucasian students.

1: Disagree, with no explanation or explanation is not logical.

0: Agree **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

QUESTION B.3. Assume that you are a Grade 7 teacher and these Grade 7 data are for mid-year student performance on a benchmark test. If there is a particular group of seventh graders you think will be most likely to have trouble scoring at the basic level or higher on the state test at the end of the year, please point out their data in this table. Explain your answer.

Scoring Rubric:

2: Candidate mentions groups in which 20 percent or more students are scoring below basic (African-American females, American Indian males, Hispanic females and males, Caucasian females and males)

1: Candidate mentions that not all groups are identified or that the identified groups do not align with the data.

0: Candidate does not identify any groups **OR** candidate does not know **OR** scorer cannot conclude whether answer is correct or incorrect.

QUESTION B.4. Now let's go back to the Grade 7 data in Table 1. Assume that these data are for last year's seventh graders. If there have been no major changes in the school's student body, teachers, or curriculum, what would you expect this year's data to look like?

Scoring Rubric:

2: Candidate has a clear and logical response that states an opinion **AND** has provided a rationale for his or her thinking.

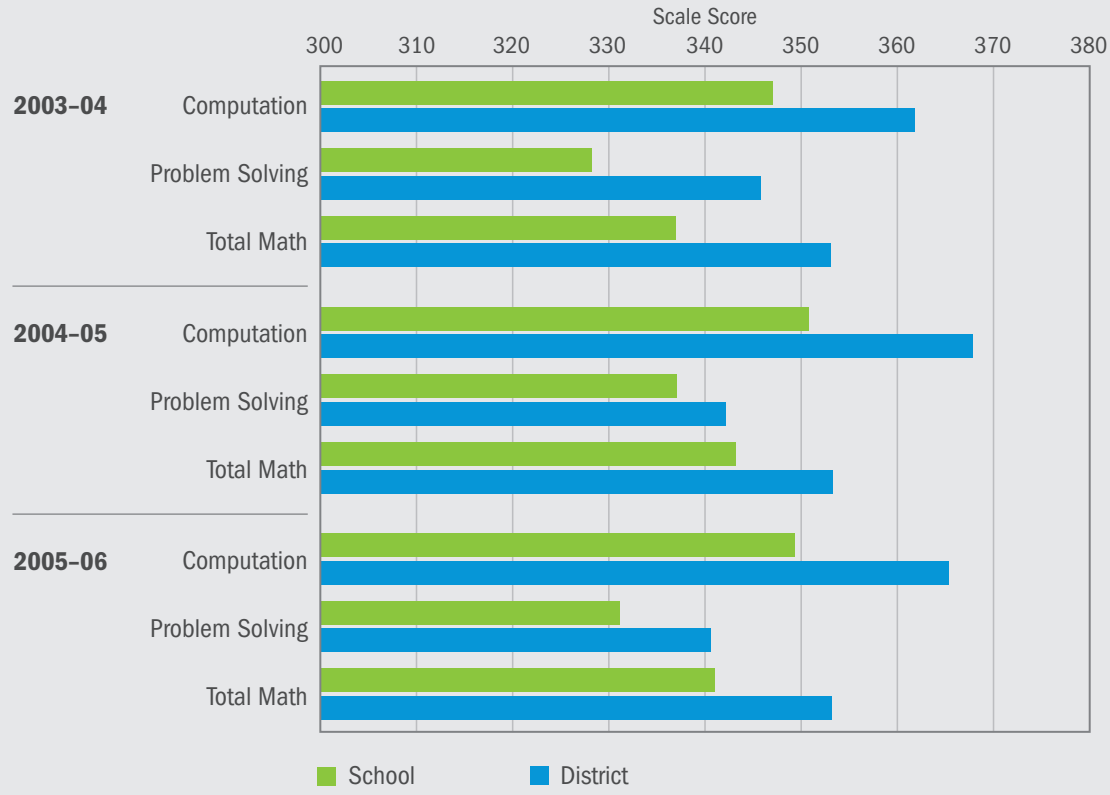
1: Candidate's response is clear but lacks logic or is insufficiently supported with reason.

0: Candidate does not have a clear response **OR** does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

Scenario C: Reading a Bar Graph

Figure 1 is a bar graph of Grade 6 student mathematics scores on the annual state test. Three years of data are displayed for the school and the district: 2003–04, 2004–05, and 2005–06. The scores are separated into computation, problem solving, and total mathematics scores.

Figure 1. Grade 6 Mathematics Exam Results, Disaggregated by Skill Set



Use the information from Figure 1 to answer the following questions.

QUESTION C.1. What does the graph tell you about sixth graders' mathematics achievement at this school, compared to the district? Explain your answer.

Scoring Rubric:

2: Candidate points out at least two obvious facts (the school's scores are consistently lower than the district's scores; and there is a marginal increase in scores in the middle, which plateaus or decreases slightly in the third year) **AND** provides explanations for these situations.

1: Candidate lists observations without a logical or coherent explanation.

0: Candidate does not have a clear response **OR** does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

QUESTION C.2. Following are a series of statements that a teacher might make about the data in Figure 1. Please respond to each statement, indicating whether you agree or disagree with the teacher's statement and the reasons why.

Statement 1: In Grade 6 mathematics, the school does better than the district as a whole. (Do you agree or disagree? Please explain your answer.)

Scoring Rubric:

2: Disagree (the school's total mathematics scores are lower than the district's mathematics scores).

1: Disagree, but with no explanation.

0: Agree **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

Statement 2: Relative to the district as a whole, the school's sixth graders have been getting better in their problem-solving skills. (Do you agree or disagree? Please explain your answer.)

Scoring Rubric:

2: Agree (based on a *clearly identifiable comparison* of problem-solving scores for the school and the district).

1: Agree (based only on the school data; no clear, identifiable comparison with district) **OR** agree with no explanation.

0: Disagree **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

Statement 3: The school's progress in narrowing the Grade 6 mathematics achievement gap with the rest of the district has been in problem solving rather than computation. (Do you agree or disagree? Please explain your answer.)

Scoring Rubric:

2: Agree, with the explanation that the gap between school and district scores decreases more for problem solving than for computation.

1: Agree, but with no explanation.

0: Disagree **OR** candidate does not know **OR** scorer cannot conclude whether the answer is correct or incorrect.

QUESTION C.3. Suppose the school had started using a new mathematics program at the beginning of the 2004–05 school year while the rest of the district continued with the old program. Looking at these data, what are your thoughts about the new curriculum?

Scoring Rubric:

2: Candidate acknowledges the marginal increase in total mathematics scores in 2004–05 but says that this improvement cannot be conclusively attributed to the new mathematics curriculum introduced **AND** lists some other variables (such as extra coaching) that could have contributed to the increase in mathematics scores **AND** states the need for more data to prove the link.

1: Candidate agrees or disagrees that the curriculum might have made a difference but offers no explanation.

0: Candidate agrees that the curriculum made a difference **OR** does not know **OR** scorer cannot conclude whether answer is correct or incorrect.

QUESTION C.4. Going beyond changes to the curriculum, what other issues or possible explanations should be taken into account? Please explain your answer.

Scoring Rubric:

2: Candidate lists at least three other explanations for the marginal increase in mathematics scores for Grade 6 students in the school **AND** these explanations provided are logical explanations.

1: Candidate lists at least three other explanations for the marginal increase in mathematics scores for Grade 6 students in the school, but the explanations are not well reasoned or lack sufficient support by referencing the data.

0: Candidate does not have a clear response **OR** does not know **OR** the scorer cannot conclude whether the answer is correct or incorrect.

Tool 9: Data Analysis Task Scoring Form

Directions: *After a candidate has completed* ***Tool 11: Data Analysis Task (Version for Candidates)****, use the rubrics in* ***Tool 8: Data Analysis Task With Answer Key (Version for Task Facilitator)*** *to determine the candidate's scores. Then record the scores below.*

Candidate Name: _____

Date Accessed: _____

Scorer Name and Date: _____

Items	Score
Scenario A: Planning to Use Data	
A.1 Choosing a query	
A.2 Planning to acquire additional information	
A.3 Making data public	
Scenario B: Interpreting Data	
B.1 Identifying differences among groups	
B.2. Statement 1	
B.2 Statement 2	
B.2 Statement 3	
B.3 Identifying groups that struggle	
B.4 Expectations for next year	
Scenario C: Reading a Bar Graph	
C.1 Understanding the graph	
C.2 Statement 1	
C.2 Statement 2	
C.2 Statement 3	
C.3 Performance of new curriculum	
C.4 Possible explanations for data	
Total	**30 possible points**

Classroom Observation Summary

Based on the observation you have just completed, reflect on the following guiding questions.

Reflect and Analyze

What do you know about student learning in this classroom?

What do you know about teaching practices in this classroom?

What feedback would you present to this teacher to improve his or her instructional practice?

How do your observations of this teacher inform how you might better develop this individual's talent?

Leading Learning

How do you use classroom observations in monitoring teaching?

How do you use classroom observations in monitoring learning?

How do you engage teachers in using classroom observations to enhance their professional learning?