

Data Literacy (Knowledge/Skills by Domain) Survey Results
January 26, 2016

Dear PDSAC Member,

Some of you participated in a survey about perceptions from school administrators as to the knowledge and the skills in the area of Data Literacy that are most important and valued in a new teacher. There are five domains of associated specific knowledge and skills for data literacy. The domains include: identify problems and frame questions, use data, transform data into information, transform information into a decision, and evaluate outcomes.







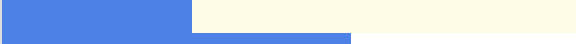
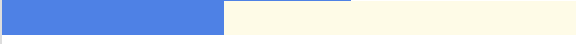


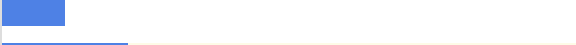
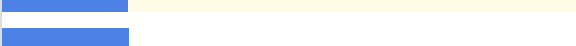
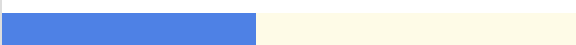


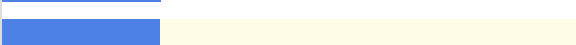
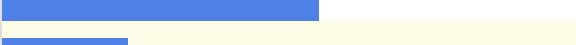




The domains and the knowledge and skills indicators that were the survey items are a result of the work of Ellen Mandinach, a Senior Research Scientist at WestEd. Dr. Mandinach is an expert in the area of data-driven decision making at the classroom, district, and state levels. Her work over the past several years has focused on understanding how educators are using data to inform practice. Ellen has authored a number of publications for academic journals, technical reports, and four books. Her latest article in progress is titled, *What Does It Mean For Teachers To Be Data Literate: Laying Out the Skills, Knowledge, and Dispositions*. (Co-authored by Edith S. Gummer, Ewing Marion Kauffman Foundation.)


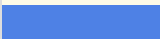





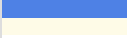









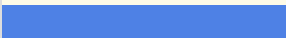
Drs. Jenn Manak and Jo Hoffman are exploring the evidence and the extent to which data literacy knowledge and skills are demonstrated by our Elementary candidates during their student teaching experience.


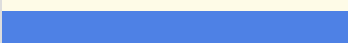
Please take a moment to look at the indicators and the survey results. We welcome your comments and insights!!

Jo.hoffman@bridgew.edu

All the best,
Jo Hoffman

#	Answer		Response	%
1	Articulate and communicate the problem/question (identify problems and frame questions)		9	60%
2	Understand contextual issues - Student level (identify problems and frame questions)		10	67%
3	Understand contextual issues - School level (identify problems and frame questions)		5	33%
4	Involve other participants (identify problems and frame questions)		5	33%
5	Frame questions (identify problems and frame questions)		4	27%
6	Understand student privacy (identify problems and frame questions)		6	40%
7	Identify possible sources of data (use data)		6	40%
8	Understand the purpose of different data (use data)		11	73%
9	Understand how to generate data (use data)		7	47%
10	Understand assessment - use formative and summative assessments (use data)		13	87%
11	Develop sound assessment design and implementation (use data)		7	47%
12	Understand data properties - multiple measures/sources (use data)		2	13%
13	Use qualitative and quantitative data (use data)		4	27%
14	Understand specificity of data to question/problem (use data)		4	27%
15	Understand what data are appropriate (use data)		8	53%
16	Understand data quality (use data)		7	47%
17	Understand elements of data accuracy, appropriateness, and completeness (use data)		6	40%
18	Understand how to access data -- locate, access, retrieve (use data)		5	33%
19	Use technologies to support data use (use data)		5	33%
20	Understand how to analyze data (use data)		10	67%
21	Manage data - organize, prioritize, examine, integrate, manipulate (use data)		4	27%

22	Drill down into data - aggregate, disaggregate (use data)		3	20%
23	Consider impact and consequences - intended and unintended (transform data into information,)		5	33%
24	Test assumptions (transform data into information,)		2	13%
25	Generate hypothetical connections to instruction (transform data into information,)		5	33%
26	Understand and use data displays and representations (transform data into information,)		2	13%
27	Assess patterns and trends (transform data into information,)		6	40%
28	Probe for causality - use statistics (transform data into information,)		3	20%
29	Synthesize diverse data (transform data into information,)		4	27%
30	Summarize and explain data (transform data into information,)		7	47%
31	Articulate inferences and conclusions (transform data into information,)		3	20%
32	Determine next instructional steps (transform information into a decision)		10	67%
33	Monitor student performance (transform information into a decision)		11	73%
34	Understand the context for the decision (transform information into a decision)		4	27%
35	Diagnose what students need (transform information into a decision)		10	67%
36	Make instructional adjustments (transform information into a decision)		12	80%
37	Consider need for iterative decision cycles (evaluate outcomes)		1	7%
38	Re-examine original question or problem (evaluate outcomes)		5	33%
39	Compare performance pre- and post-decision (evaluate outcomes)		9	60%

40	Monitor changes in classroom practice (evaluate outcomes)		12	80%
41	Monitor student changes in performance (evaluate outcomes)		11	73%

Statistic	Value
Min Value	1
Max Value	41
Total Responses	15