

## Data Literacies Definitions

Term	Definition	Clarification
action plan	a sequence of steps that must be taken, or activities that must be performed well, for a strategy to succeed. An action plan has three major elements: specific roles, timelines, and resources.	An action plan for improvement serves as the guide for all staff in implementing strategies to achieve a goal. The plan will direct each staff member over a period of time and should help all staff implement strategies to improve student learning.
analytic approach	any method based on breaking down a complex process into its parts so as to better understand the whole	
articulated curriculum	curriculum that has been sequenced and aligned across grade levels (vertical alignment), classrooms (horizontal alignment), and subject areas	
assessment	an instrument used to collect data about and evaluate student performance	
authentic assessment	a continuous evaluation of student learning based on pre-determined criteria, such as a rubric, that requires students to demonstrate their understanding of content or acquisition of skills in a meaningful or applied context	
baseline data	the level of performance at the start of a data collection or process that can be used to measure change in indicators in the future.	
categorical data	information that consists of counts or observations in specific categories rather than measurements	Categorical data that have a meaningful order (e.g. 1-5 rating) are referred to more specifically as <i>ordinal data</i> , whereas categorical data without a meaningful order (e.g. yes-no response) are known as <i>nominal data</i> .
cohort	a group of individuals who share a similar characteristic or experience	For example, a student's "expected graduation year" or "cohort" is determined by adding four years to the school year in which the student enters grade nine for the first time.
communication medium	a means or method of distributing information appropriate for identified audiences	
comprehensive assessment system	a system and process for gathering, managing, analyzing and disseminating data from multiple measures to guide and inform instructional decisions.	
continuous data	a variable, score, or distribution that can take on any numerical value within its range	There are two types of continuous data, interval and ratio. <ul style="list-style-type: none"> <li>• interval data has no defined zero point (e.g. temperature)</li> <li>• ratio data has a true zero</li> </ul>

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		point (e.g. student assessment score)
cut scores	selected points on the score scale of a test; used to determine whether a particular test score is sufficient for a specific purpose	On the NeSA testing, a scale score that classifies a result as below, meets, or exceeds.
data profile (school profile)	a comprehensive, organized set of demographic, perceptions, student learning, and school process data. A profile includes multiple years of data for determining trends.	The profile should include a collection of clear charts and graphs with succinct summary statements that will aid in an analysis of progress and needs.
demographic data	statistical characteristics of human populations (e.g. ethnicity)	May include numbers of students at each grade level, longitudinal enrollment trends, the number of males and females, current numbers and trend data of minority students, special education and Title I membership, etc. Demographic data can also include participation information, such as enrollment patterns in elective programs and participation in extracurricular activities.
disaggregation	the process of breaking down data into smaller units or sets of observations	
effect size	any of various measures of the magnitude or meaningfulness of a relationship between two variables	Often effect sizes are interpreted as indicating the practical significance of a research finding.
equal interval scale	the requirement for an interval scale to have an equal distance between numbers or units over all parts of the scale.	The difference between 1 and 2 would be equal to the difference between 19 and 20. e.g. NWEA RIT scale
formative assessment	a continuous process of evaluating student learning to make adjustments in teaching and support to meet student learning needs	Information that can be collected and used to improve or inform progress during a learning opportunity. In contrast to summative assessment that is used to measure skill acquisition at the end of an instructional period.
improvement plan	plan(s) for organizing people, processes and systems to implement improvement strategies/interventions	Also known as a school improvement plan or continuous improvement plan.
instructional processes	techniques and processes teachers use in learning environment	
longitudinal data	describes data that are collected on a specific group of people over a period of time. The data are useful for understanding change over time.	
mean	the numerical average of a set of scores, computed as the sum of all scores divided by the number of scores	1, 2, 4, 8, 10 added together = 25 25 ÷ 5 (number of values in the distribution) = 5 5 is the mean of this distribution of values

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median	the midpoint in a distribution, that is, the score or value that divides it into two equal-sized halves	1, 2, 4, <u>6</u> , 8, 10, 12 ~ <b>6</b> separates the lower half of values (1, 2, and 4) from the upper half of values (8, 10, and 12) 2, 4, <u>10</u> , <u>14</u> , 15, 20 ~ <b>12</b> is the median; 10 and 14 separate the lower half of values from the upper half. The average of 10 + 14 is <b>12</b>
mission	succinctly defined fundamental purpose of an organization or an enterprise, that describes why it exists	
mode	the most frequently occurring score in a set of data	1, 2, 4, <u>5</u> , <u>5</u> , <u>5</u> , 6, 8, 10, 12 ~ <b>5</b> is the mode
normal curve equivalent (NCE)	a way of standardizing test scores on a 0-99 scale, similar to a percentile rank, but on an equal-interval scale	
panel data	data that examine the exact same subjects on single or multiple attributes over time	Looking at multiple years of test scores for the exact same set of students. This would include only students who had test scores in all years examined.
perceptions data	observations, opinions, beliefs, or convictions individuals have about a system or organization (e.g. school, district)	
percentile	the location of a score in a distribution expressed as the percentage of cases in the data set with scores equal to or below the score in question	The 50 <sup>th</sup> percentile is the value below which 50 percent of the scores may be found.
program data	data collected on a program that is the same from year to year	i.e. the 7 <sup>th</sup> grade math performance in a school/district from year 1 to year 2. Programs may include instructional practices and patterns, organization, curricular and co-curricular programs, equity, safety, staffing, etc.
qualitative data	information that is not expressed numerically	Descriptions of behavior, thoughts, attitudes, and experiences.
quantitative data	information expressed numerically	Test scores or measurements of length or width.
quality data culture	the shared belief that good data are an integral part of teaching, learning, and managing schools	The components of a quality data culture are accuracy, security, utility, and timeliness.
range	difference between the highest and lowest value in a distribution of values	<u>1</u> , 2, 4, 6, 8, 10 <u>12</u> ~ $12-1 = 11$ The Range is <b>11</b>
raw score	a participant's score on a test before it is converted to other units, or another form, or subjected to quantitative or qualitative analysis	Number of test items = 100 Number of items answered correctly = 72 Raw score = <b>72</b>
reliability	describes stability and consistency of data between tests	If the same test were given to a group of students twice without additional teaching, then the results would be similar.

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research based strategies	refers to any concept or strategy that is derived from or informed by objective evidence consisting largely or entirely of data, academic research, or scientific findings	Educators compile, analyze, and use objective evidence to inform the design of an academic program or guide the modification of instructional techniques.
scale score	a transformed version of the raw score determined by the raw score and the difficulty of the items on a specific test. Scale scores remain constant and can be compared over time.	A raw score is converted to a common scale score when tests have multiple versions for the purpose of comparing scores and students.
school process data	see <i>program data</i>	
snapshot data	data collected at one specific time.	
standard deviation	variation or dispersion from the mean (average)	A low standard deviation indicates that the data points tend to be very close to the mean; whereas, a high standard deviation indicates that the data are spread out over a large range of values.
student learning data	see <i>student performance data</i>	
summative assessment	assessments used to evaluate learning, skill acquisition, or achievement at the conclusion of a defined instructional period	In contrast to formative assessment that is a continuous process of evaluating student learning.
trend data	factual information, numerical or narrative, that conveys patterns or directions about student learning, instruction and/or organizational conditions over time	This may include the exact same students year after year or those with similar characteristics.
validity	an assessment's degree of consistency to measure what the assessment was designed to measure, such as specific content or skills	
vision	the desired or intended future state of an organization or enterprise in terms of its fundamental objectives relative to key, core areas that include curriculum, instruction, assessment, and environment	Includes core values and beliefs, best practice research, a core purpose, a mission for the school and support structures.

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