Definition: Quantitative and qualitative assessment is the ability to understand data for the purposes of drawing accurate conclusions and taking appropriate action.

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| **Categories** | **Needs Improvement****(poor)****1** | **Developing****(low satisfactory)****2** | **Proficient****(high satisfactory)****3** | **Outstanding****(exceeds expectations)****4** | **Score** |
| **Compiling data and information** | * Too small (or large) a set of data are compiled for analysis.
* Data are not relevant for the assessment purposes.
* The data are from unreliable sources, or are inaccurate.
* The concept of data precision is not understood.
 | * A seemingly adequately sized database is compiled.
* Some data are not relevant, or relevancy is not questioned.
* Some of the data are from unreliable sources, or shown to be inaccurate.
* A false level of precision is accepted and used, without general understanding of its pitfalls.
 | * There are enough data in the compiled database.
* Compiled data are relevant.
* The data are from a reliable source, and are shown to be accurate prior to use.
* A proper level of precision is used when compiling data.
 | * There are both enough data and yet not excessive data in the compiled database.
* Compiled data are both relevant and representative of the topic under assessment.
* The data are from a reliable source, and are shown to be accurate using acceptable quality assurance (QA) techniques.
* Precision checks are used to demonstrate appropriate precision level.
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| **Transforming data and information** | * Tabulations are simply “data dumps” without statistical or graphical analysis.
* Graphics are poorly presented, and not meaningful.
* Statistics are poorly applied.
* There are many math errors.
 | * Tabulated data are useful summaries.
* Graphical techniques are used.
* Simple statistics are used.
* There are some math errors.
 | * Tabulations are effective and arranged well for analysis.
* Graphics are appropriate and give further insight.
* Statistical analysis is sophisticated and appropriate.
* Math errors are few.
 | * Tabulated data convey the essence of the assessment, and give new insights.
* Graphics are powerful, employing special effects (e.g., 3-D) well.
* Special statistics are used which allow better acceptance of conclusions.
* No math errors.
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| **Interpreting data and information** | * There is no interpolation of data.
* There is no extrapolation of data.
* Trend analysis is not used.
 | * Some data interpolation is used in analysis.
* Some extrapolation of data is used in data analysis.
* Data trends are developed.
 | * An appropriate level of data interpolation is used during analysis.
* Data extrapolation is credibly used.
* Data are trended to appropriate limits.
 | * Data interpolation is used, and the limitations are shown & understood.
* Data extrapolation is used, and the limitations are shown & understood.
* Data trends are sophisticated, and not necessarily linear.
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| **Using data and information** | * The conclusions from data assessment are not credible or supported by the data.
* The assessed data are not applicable to the studied problem.
 | * The data’s assessment is credible and the conclusions are accepted.
* The assessed data seem applicable to the studied problem.
 | * The credibility of the assessment and the conclusions are demonstrated to be acceptable.
* The assessed data are critically challenged to demonstrate their acceptance and applicability.
 | * The assessment and conclusions are shown to be credible and acceptable using an independent second approach.
* The assessed data are critically challenged to demonstrate their acceptance and applicability.
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