Canon 4 Recommended Practices and Training

1) Develop a standard reporting framework to improve the consistency of reports and minimize the likelihood of bias in data presentation.
   a. Develop and apply statistical standards and guidelines for writing data reports and presenting data tables. For example, many issues related to axis scales, years reported, and graphing style (e.g., line chart, pie chart, or stacked bars) can be standardized regardless of data values.
   b. Include, in all reports, an explanation of how past reporting was presented and any changes in data methods (e.g., an assessment tool) or presentation (e.g., a report format); state the reasons why changes were made.
   c. To the extent possible, use the same presentation standards in all report products. If information is presented in a standard format across years and across studies, audiences will learn to read reports easily – they can concentrate on the information rather than on the way in which it is presented.
   d. Before releasing a report, undertake an independent review to assess whether the data are presented objectively and without bias, especially when they describe a situation that is not favorable to those responsible for producing the report.

2) Incorporate improvements to research design and methodology in data reporting, but do not let these changes mislead data interpretation. For example, if your dropout formula is adjusted and you see a correction in one direction or another because of the modification, do not declare that there was a meaningful change in your school's retention efforts unless you can crosswalk or otherwise compare the two methods. Similarly, a recalibrated assessment may offer neither positive nor negative evidence of change in student performance.

3) Correct errors that are identified in previously reported data. If published data are discovered to be inaccurate and correcting the data is feasible, the data should be corrected with an explanation and documentation in subsequent reports or releases of the data. Establish procedures for making corrections to ensure that revised releases include clear statements about the impact the revisions may have on previously reported statistics.

4) Train data reporters and users to follow standard data preparation and presentation methodologies so that data are presented as accurately and consistently as possible.Customize training efforts by job type as appropriate for communicating concepts and translating instruction into practice. For example, one exercise for technical staff would be to present them with an array of tables or graphs representing the same information but presented in ways that would mislead a reader. The task would be to find the "bad" presentations and talk about how each biased the data. Non-technical users, such as instructional staff or board members, could discuss these same tables or graphics after the trainer has highlighted the flaws in presentation. Another approach that might help staff who prepare presentations would be an open discussion (without names!) of situations in which they have been encouraged, or tempted, to bend the rules in showing data a little more favorably.