Data Collection and Analysis

Collecting data means putting your plan for collecting information into operation. You've decided how you're going to get information – whether by review of records, observation, interviews, surveys, testing, or other methods – and now you have to implement your plan.

Why do we collect data?

- Data can provide credible evidence to show that your program/department/office is successful.
- It may uncover and address limitations.
- It helps with internal quality, efficiency, productivity, funding, etc.
- It shows that you are serious about improving your program/unit/organization.
- It helps us grow as an institution.

What do we mean by collecting data?

- Collecting **information** about your operation/program.
    - Administration of services/programs.
    - Processes involved in delivering services.
    - Efficiency/progress in meeting timelines/goals.
- **Using your measures** to collect good information.
    - Surveys, document records, logs, reports, tests/exams, evaluations, interviews, etc.
- **Organizing** data in ways that makes it easier to **track, monitor, retrieve, and share.**

When should data be collected?

- Data collection should start no later than when you begin your work or before you begin to establish a baseline or starting point.
- Data should be collected for a period of time in order to determine changes and trends.
- Data might be collected pre- and post an intervention to determine impact.
- In order to measure your program's long-term effects, follow-up data should be collected for a period of time following the conclusion of your program.

Think about how information will be examined, and what comparisons will be made:

Will you want to provide descriptive information? Descriptive data might include:
Percentages ('strongly improved', 'very satisfied')
Means, medians on examinations
Summaries of scores on products, performances

Do you want to provide comparative information? Comparative data might include:
External norms, local norms, comparisons to previous findings
Comparisons to Division, College norms
Subgroup data (students in various concentrations within program; year in program)

What does it mean to analyze data?

- **Examining** data in ways that reveal:
  - Outcomes
  - Trends
  - Patterns
  - Relationships
- **Summarizing** data so that it can be reviewed and interpreted.
  - May include simple counting, frequencies, rates, and percentages.
  - May include statistical analysis, calculating mean/mode/median, differences, correlations, etc.
  - May include graphing, tables, etc. to visualize data patterns.
- **Comparing** actual results to previously determined goals and targets.
  - Did we meet the target?
  - Did we get close?
  - Did we go beyond?
- Looking at data to **identify changes** (marked increases, decreases) in the measures over time (weeks, months, semesters, years).
  - You may compare your data to previously collected data
  - You may compare your data to other groups' data to draw some conclusions.
    - Previous surveys takers, student cohorts.
    - Peer institutions/schools.
    - Statewide figures, national data.

Analyzing data helps us determine:

- Patterns of strength and weakness
- Areas of success and areas in need of improvement
- Effectiveness and efficiency

Data helps us to better understand our work and the impact it has on those we serve.