Data-Driven Decision Making Model for Educators

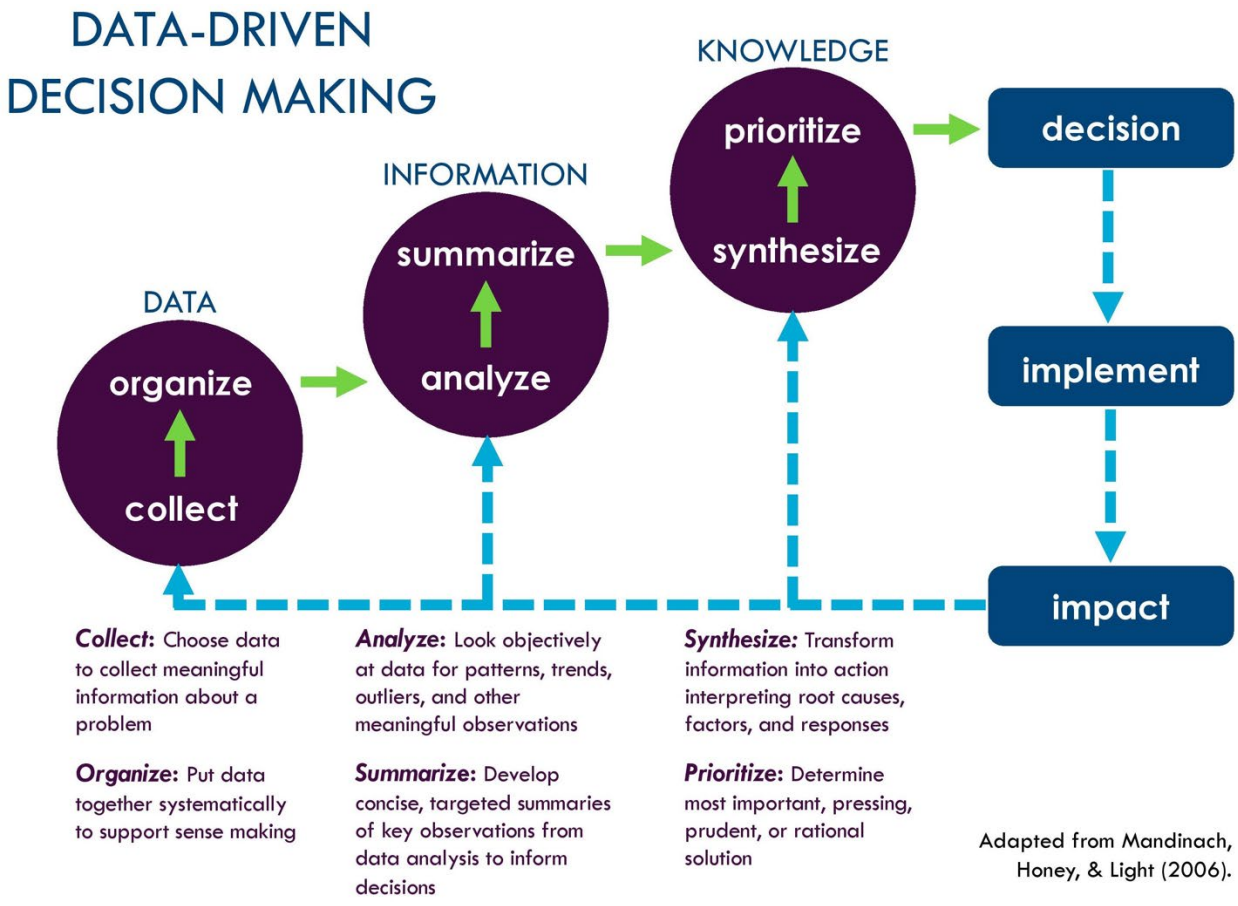
This resource has been adapted from, "A Theoretical Framework for Data-Driven Decision Making," written by Ellen B. Mandinach, Margaret Honey, and Daniel Light.

Mandinach, et al. (2006), developed a model in which education moves along a continuum from **data**, which do not have any meaning in and of themselves, through **information**, the process by which educators and leaders give meaning to data by connecting it with a context, and finally into **knowledge**, wherein data becomes useful for guiding future action. This model has been adapted to serve as a process guide for data use for educators and leaders.

Data Use Model: Data, Information, Knowledge

Figure 1 models the data-driven decision making process in which data, information, and knowledge are used to inform decisions and monitor their impact in a continuous cycle.

Figure 1. Data-Driven Decision Making Model



Data

- *Collect*: Educational decision makers must decide which data to collect to meaningfully inform the issue at hand. This decision should be guided by the specific problem or issue the educational decision maker is trying to understand.
- *Organize*: Next, educational decision makers must put the data together in some systematic way that can support sensemaking. Decisions about organizations should be informed by who is using the data and how.

Information

- *Analyze*: This process involves educational decision makers looking carefully at the collected data to identify patterns, trends, outliers, and other noticings that may have meaning. Data should be viewed objectively, without interpretation.

- *Summarize*: In this process, concise and targeted summaries of key noticings from data analysis are developed and written into usable knowledge that can inform actionable decisions.

Knowledge

- *Synthesize:* This is the process by which the meaningful information garnered in the information stage is transformed into actionable information. This process moves beyond what can simply be observed in the data to interpretation about root causes and contributing factors as well as possible responses.
- *Prioritize*: This is the process by which **decision makers** determine what is, "the most important, most pressing, the most prudent, or the most rational solution to a particular educational problem" (Mandinanch et al., 2006, p. 9).

Implement for Improvement

Once educational decision makers have completed the process of making meaning from data, they must translate the knowledge they generated into action. These actions should be consistent with the improvement habits of mind we introduced in the previous activity. Each of these implementation steps should feed back into the data use cycle described above.

1. **Decision**: Establish a clear aim statement and theory of improvement.
2. **Implementation**: Implement your theory at a small scale to support learning from change and make adjustments.
3. **Impact**: Use your system of measures to understand the impact of your effort and to make decisions about how to adjust and expand further.

References:

Mandinach, E., Honey, M. and Light, D. (2006). *A theoretical framework for data-driven decision making*. Paper presented at the annual meeting of AERA, San Francisco. April 9, 2006.