

Relationship of the DIO Cycle of Evidence to Other Frameworks

The DIO Cycle of Evidence does not replace evaluation or R&D models and tools. Rather, it can be used alongside evaluation models as a framework to guide thinking about evidence and to provide additional clarity in planning and gathering evidence for projects. In this section, the relationships between the DIO Cycle of Evidence and other frameworks are described. For more information about evaluation models, including the types of evaluation questions addressed with each model, see Stufflebeam (2001). See also Altschuld & Kumar (2002) for a description of evaluation practices in science and technology.

MSP Key Features

The DIO Cycle of Evidence operationalizes the MSP Key Feature *evidence-based designs and outcomes*. MSP projects are a vehicle designed to initiate change and provide evidence in support of improved student outcomes. *Challenging courses and curricula* and *teacher quality, quantity and diversity* are where the MSP rubber meets the road—these two Key Features are the focus of many MSP project activities. *Partnerships*—another key characteristic—drive the MSP vehicle. Like the confident, experienced driver who makes traversing a difficult, unknown road seem easier, it makes sense that strong partnerships will guide the path and promote success within complex MSP projects. To avoid getting lost or experiencing an unsuccessful journey, the road followed should be selected through *evidence-based designs* that lead to *evidence-based outcomes*, and the turns taken along the way must be supported by decisions that are based on reliable and valid evidence. When funding runs out at the end of the line, *sustainability* resulting from *institutional change* will be needed to keep things on track—to maintain the changes that have occurred. Again, *evidence-based designs and outcomes*, supported by *evidence-based decisions* along the way, will provide the foundation and support needed to sustain changes and impacts attributed to the MSP vehicle.

Activities designed to address *challenging courses and curricula*, to change *teacher quality, quantity and diversity*, to strengthen *partnerships*, and to promote *sustainability* and *institutional change* need to be grounded in *evidence-based designs*, and the impact determined and justified by *evidence-based outcomes*. Additionally, mid-course corrections occurring along the path need to be supported and documented through *evidence-based decision-making*. The DIO Cycle of Evidence guides planning and gathering the evidence needed.

Typical Evaluation Plans

Most evaluation work begins with the development of a plan for carrying out an evaluation study. The format may vary, but plans usually address the following components (Torres, Preskill, & Piontek, 2005):

- Background/organizational context ✓
- Purpose of the evaluation
- Audiences
- Evaluation questions ✓
- Evaluation approach and data collection procedures ✓
- Data analysis procedures
- Evaluation products (including reports to be provided)
- Project management plan (schedule of activities) ✓
- Evaluation constraints
- Budget/costs for the evaluation

The DIO Cycle of Evidence addresses some (see check marks above) but not all of these components. Use of the DIO Cycle of Evidence constitutes a major part of the evaluation planning process, and as such it would be *part* of an overall evaluation plan. Specifically, for its implementation and outcomes phases, the DIO Cycle of Evidence specifies the evaluation questions to be answered; and the data collection (or evidentiary) sources, timeframe, methods, and instruments. This information is virtually the same kind of information that would be found in the evaluation questions, data collection procedures, and project management components of a typical evaluation plan.

Additionally, the Design phase of the DIO Cycle of Evidence provides a rationale and justification for the project's design. Some of this kind of information might be included in the background/organizational context component of an evaluation plan.

Finally, the DIO Cycle of Evidence includes information about *how* the evaluation planning process takes place as well as *how* and *when* decisions based on evaluation findings should be made. In these two aspects, it goes beyond a typical evaluation plan to address both the process of evaluation planning and the use of findings.

Logic Models

Logic models are frequently used to help articulate program theory and to explicate the link between specific project activities and intended project outcomes. However, competently developing and applying logic models requires substantial training and experience, particularly for projects as large and complex as MSP projects.

The DIO Cycle of Evidence was designed to help overcome this need for high levels of expertise—to help articulate the link between project activities and outcomes. Like logic models, the DIO Cycle of Evidence is intended to help produce sound project designs and activities, and to define the evidence required to evaluate designs, activities, and outcomes. While the DIO Cycle of Evidence is not as complex as logic models, it can be subsumed within logic models, and in fact provides specific guidance in the form of checklist questions for better articulating the linkages and evidence needed to attribute outcomes to project activities.

For more information on using logic models, see W. K. Kellogg Foundation (2001); Owen & Rogers (1999); University of WI-Extension (2002).