**Overview of Data-Driven Decision-Making (DDDM)**

*Ways for System Initiatives to Enhance DDDM*

Let’s talk about how a state system can evaluate its own initiatives by utilizing data-driven decision-making processes. For a system to evaluate its own design, it is desirable to have a theory of change (Coffman, 2007). Coffman (2007, p.1) described the notion of “theory of change” gained its attention in the early childhood field especially in the 1990s. Connell and the team (1995) introduced the approach for evaluating complex initiatives such as Community Initiatives for Children and Families. Despite its popularity as a system level initiative, Coffman (2007) noted theories of change is not a “panacea for all evaluation dilemmas” (p.1). The approach was merely describing the system elements and its complexities rather than testing assumptions and validity of assessments (Coffman, 2007).

Coffman (2007) further described and introduced the theory of change that can be implemented for a Quality Rating Improvement System (QRIS). The five elements of a system initiative consist of *context, components, connections, infrastructure,* and *scale* (Coffman, 2007, p.2)*.* *Context* describes the political environment around the system that sketches policy and funding changes for sustaining the system. *Components* establishes high-performance systems that drives results for system initiatives. *Connections* creates linkages between system components for further improvement. *Infrastructure* develops and supports the system. And finally, *scale* ensures access to system to a broader community and beneficiaries so that it produces inclusive results for all. Not all system has all five element (Coffman, 2007) and it may be worth dissecting activities, outcomes, and impacts of the Coffman’s model that describes the elements of DDDM. All five elements of Coffman (2007)’s model describes a methodology for collecting and analyzing data for system improvements, yet I believe it’s worth further investigating the *connections* and *infrastructure* stages of the change.

During the *connections* phase*,* Coffman (2007) utilized questions to inquire whether the initiative connected implementation components as intended and whether those connections produced intended outcomes. Several approaches were introduced including Social Network Analysis (Durland & Fredericks, 2005) to understand the relationships among actors, groups, and entities in a system. By identifying nodes and networks among those ingredients, one can establish and determine whether the network connections look similar or different over time (Coffman, 2007). An experimental or quasi-experimental design can be constructed for understanding how connections produced intended outcomes (Coffman, 2007). For instance, Coffman (2007) introduced a case study from SPARK initiative evaluation as Berkley (2005) equipped a cluster evaluation where an overall evaluator assesses the initiative level assessment across the SPARK sites and project-level evaluators at a site level. Despite the methodology was not clearly articulated, findings suggest partnerships within the SPARK sites and the intentional leadership effort from key partners became catalysts for local, state, and national level change (Coffman, 2007). These outcomes were queried based on kindergarten readiness assessments, focus groups and key informant interviews at a site level, and surveys and quarterly calls among grantees which also lead to content analysis of key documentation (Berkley, 2005).

It seemed clear to me that the evaluation team utilized multiple approaches including quantitative and qualitative data collection, the effort resulted in a great example for creating a process for shared data systems for monitoring individual and organizational level outcomes for system linkages, alignment, and coordination (Coffman, 2007), so that the data can further describe elements for data-driven decision-making processes.

In the *infrastructure* phase, Coffman (2007) focused on asking whether the infrastructure for the initiative support the original objectives and inquiring whether the initiative achieved the objectives for “effectiveness, sustainability, and quality” (p.17). Case study or performance audit were introduced for understanding the effectiveness of such infrastructure (Coffman, 2007). As a type of post-hoc analysis for understanding success or failure of a system, Coffman (2007) described the success case method of Brinkerhoff (2003) combined storytelling features and deliverables such as reports that all actors in a system can “understand and believe” (p.23) the initiatives. Performance audit was also introduced which determines how well an entity is functioning for its intended initiative (Coffman, 2007). Performing customer satisfaction surveys or program evaluations can help stakeholders to understand whether a particular service is considered accessible and user-intuitive, or it has an impact to the intended recipient of the service (Coffman, 2007). This was another great example where DDDM was employed by creating a cross-system governance protocol or system-wide use of data to describe how infrastructural outcomes connect to beneficiary impacts (Coffman, 2007). It seemed well organized to ensure the ecosystem of a complex system level initiatives which produces better impacts for beneficiaries across “a broad spectrum of domains and on a system-wide population level” (Coffman, 2007, p.8).