Service Organization & Data Use:
Learnings from the Workforce Development Field

Written by
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Nonprofits understand that data can help allocate resources, improve service quality, and communicate impact. In practice, however, collecting, aligning, and deploying data across multi-level organizations is difficult. To understand more about how workforce development organizations are using data—and how that compares to the research literature—the Future Services Institute (FSI) research team had conversations with around 40 managers and frontline staff of organizations participating as part of technical visits for the Equity Works network. The team sought to identify opportunities and barriers in data use and inform how future Equity Works network sessions work can create conditions that promote its use.

Participating organizations had a range of expertise and experience in using data. Organizations furthest along the data use continuum tended to share a collective understanding of the purpose of data and knew the appropriate actions to take when presented with information. When organizations aligned these concepts, they were able to use data to inform decisions. When they were not aligned, organizations had more difficulty using their data. These findings from conversations with Equity Works Participants match predictions from the academic literature.

Nonprofits use data to inform a wide array of organizational processes. Practically, information on program participation allows managers to allocate and align organizational resources. These shifts can both be opportunistic and also better align resources with organizational strengths; for example, one organization tested night classes for clients, but the data showed poor retention and the nonprofit refocused resources to in-demand and better performing afternoon classes. Many organizations collect detailed characteristics of clients—like age, race, and gender—and use this information to identify client needs and drive new efforts. Several organizations we interviewed noted the clients they served did not always represent their local communities and sought to build inroads with underserved populations.

Program participation and retention outputs also signaled performance and acted as a proxy for longer-developing and more-difficult-to-track outcomes, like job attainment. Each interviewee noted this performance data was a key component of communication to both current and future funders.


2 Equity Works is a peer-learning network made up 24 nonprofits in Minnesota’s workforce development sector. Organizations attended regular meetings to find practical ways to improve program practices and results. In the first six months of the network, organizations took part in monthly peer learning forums centered on sharing effective practices, building organization capacity, and fostering data driven program improvement. In the remaining five months, network organizations focused on addressing one “leak” within their program process. The TA site visits checked the progress on the organization’s improvement goals and identified areas where more support was necessary.

3 Interviews during technical assistance site visits were informal, and organizations self-selected into the network.
Capacity to use data

In interviews with participants, we found a desire to improve the organizational data-savvy, both as a matter of perception and to improve client outcomes. The ability to actually deploy data to answer relevant questions, however, varied from organization to organization.

To find commonalities, the FSI team internally assessed organizations on their data capacity and grouped them across a continuum. One of the most important skills we saw in higher-capacity organizations was a trusted process for teams to identify a problem, agree on testable questions, and generate information to answer those questions. Once this process was complete, these organizations acted on the insights and started again with fresh questions.

Lower-capacity organizations articulated the same commitment to data use, but often had not made the necessary investments in culture, capacity, and infrastructure to have data answer questions and inform strategy. Frontline workers in these organizations sometimes noted they did not see their data as an accurate gauge of performance and many viewed collection as a task primarily necessary to satisfy funders.

Some interviewees stated the ability to do these activities was related to the size of the organization. Yet the objective differences in organizational resources did not seem to be the most significant difference. Instead, managers and staff perception of how they should act seemed to be more important. Higher-capacity organizations believed this is how they should act and lower-capacity organizations believed resources prevented progress.

Figure 1: What research tells us about high data-capacity organizations.

<table>
<thead>
<tr>
<th>Legitimate</th>
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<tbody>
<tr>
<td>• Data should be delivered by respected managers and measured in a way that is perceived as fair.</td>
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<tr>
<td>• Data use is more common when it is a group norm. It's &quot;who we are&quot;.</td>
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<tr>
<td>• Capacity builders are necessary to train, troubleshoot, and spread data throughout the organization.</td>
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<tr>
<td>• External networks can offer technical assistance and reinforce organizational norms.</td>
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<th>Actionable</th>
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<td>• Workers need to perceive the information they receive as useful.</td>
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<tr>
<td>• Data is more effective when processes make turning insights to action &quot;automatic.&quot; This is often through tools, assessments, or protocols.</td>
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4 Related to the isomorphic tendencies noted in DiMaggio & Powell (2000), organizations pursue common structures and processes to demonstrate sophistication and legitimacy.
The importance of legitimacy

Frontline workers are the implementers of organizational interventions and the ultimate arbiters of how organizations serve clients. Research shows standard operating procedures employed by workers are resistant to change, including how data is used to help clients. To make an impact, frontline workers must perceive these new insights to be legitimate and actionable.\(^5\)

1. **The challenge (and importance) of setting a baseline**

In our visits with nonprofits, the conversation centered on an improvement goal, which provided insights into the nonprofits data collection, reporting processes, and associated data use. Collecting data on even the most straightforward measure requires organizations to facilitate complex, multi-level interactions between leadership, staff, and clients. For example, if organizations wanted to consider why client retention was low, they must:

1) Define engagement and agree upon a valid and available proxy.
2) Decide a relevant baseline and reporting period.
3) Have staff faithfully collect, collate, and report the proxy data.
4) Evaluate and communicate performance against a baseline.

All organizations, no matter their capacity, had this chain in place—even if informally—but the strength of the chain varied. High-capacity organizations had structures and social dynamics to encourage fewer breakdowns. They also, importantly, had the perception the reported indicators were an accurate and valid proxy for performance.

Over time, high-capacity organizations appear to marshal resources (e.g., time, training, systems) to strengthen the validity of the data. For example, frontline workers knew how to use database systems and consistently recorded metrics. Staff knew where to go to get help and had formal and informal channels to offer suggestions for system changes. Reporting from databases made comparisons to historical data possible, and multiple levels of the organization reviewed these reports. When the reporting was still imperfect, staff knew how to resolve issues or, at least, create workarounds.

Organizations with a lower data capacity often reported they shared data with funders, but do not regularly share it with frontline staff. At some organizations, frontline staff appeared to question the legitimacy of certain pieces of data. Lower-capacity organizations at times struggled to define relevant metrics, identify historical data, and report data. The ability to use data was often tied to particular staff. For example, in one case, a program manager noted they were recording client data, but, because “their data person” left, staff could not pull it from the database.

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\(^5\) Notable work that find these necessary prerequisites include: Asen & Gurke, 2014; Nelson, Leffler, & Hansen, 2009; Coburn, 2005; Moulton & Sandfort, 2017; Bogenschneider, Little, & Johnson, 2013.
2. Perception of a data informed culture

A common refrain in our interviews was the notion of creating a “data-driven culture”. While no organizations claimed they had attained it, high-capacity organizations noted progress. Lower-capacity organizations noted an aspiration, but lamented the lack of resources to achieve that goal.

In higher-performing organizations, managers noted using data is “who we are” and that peer organizations “look to them” for leadership. The start of the data driven culture was often a founder, executive, or manager that came from another organization with quantitative expertise. For example, one manager in a high-capacity organization spent years at a prominent nonprofit known for data collection and dissemination. These managers ensured legitimacy and made data use the norm; as one manager put it, data is the “key that starts the car.” This meant frontline workers were more likely to accept the data, even when it was uncomfortable.

This perception is consequential, especially when the data goes against the collective wisdom of workers. When it is not the norm to use data to inform judgements, it is possible to simply fit data to already existing perceptions. Frontline staff could ignore numbers because of a lack of faith in its ability to capture performance. In our interviews, staff would attribute uncomfortable data points as relics of data collection or suggest the measures themselves were poor proxies for success.

3. The role of capacity builders

High-performing organizations often described formal or informal mechanisms to reinforce the legitimacy of the data. These managers saw themselves as “capacity builders”. Their role was to ensure all levels of the organization understood the data and why it was important. Scheduled check-ins involved reviewing and hypothesizing about trends in the data. Where separate data teams or databases existed, managers integrated them into meetings with frontline staff. The existence of “data people” did not, however, relieve frontline staff from their responsibility in data collection and interpretation.

This was one area where organizations were not monolithic. Two teams in an organization often had access to similar information, but managers’ commitment to using that data differed. Some of this seemed related to performance management professional norms. For example, teams with roles in recruitment and fundraising may be more accustomed to performance measurement than staff delivering training. This may also be related to easier measurement of outcomes.

Employing data staff created a central place to train teams, troubleshoot problems, and provide reports to various levels of the organization. Interviews suggested these data teams were not sufficient if organizations failed to integrate them with frontline staff. In cases where the data team was set apart, they may become merely a tool to maintain compliance or write RFPs.

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6 This is similar to findings from Khademian (2002) and Coburn (2006).
7 Research shows the messenger is as important as the message itself. (Nelson et al., 2009; Asen & Gurke, 2014; Honig et al., 2014).
The network participants without dedicated data staff seemed to have the most difficulty using data to drive decision-making. In these organizations, there often was a view that the lack of resources made data collection impossible and the results illegitimate. The lack of investment in time and resources may signal to staff that data quality and use is unimportant.

4. **External networks**

By the nature of participating in the network, all organizations were searching externally to validate their data use. One organization noted they enjoyed the peer learning sessions in the Equity Works network because they get to talk with data people in other organizations, something that they otherwise were unable to do. For data evangelist in organizations, network sessions could increase the legitimacy of using data to support decision-making. Lower-capacity organizations seemed particularly interested in hearing about what high-capacity organizations were doing, which reflects a desire to learn from best practices. This was especially true for determining valid benchmarks.

In spite of different organizational conditions, each workforce development agency faces a similar dilemma when considering data use. For participants to use data, they must view it as legitimate. Research on organizations show that staff interpret data’s legitimacy at face value and over time. They consider as an organization whether the data matches their experience and answers relevant questions. Managers must actively find ways to inject useful insights from the data to improve performance.

**Acting on data**

Research, as well as our interviews, shows that data legitimacy was a necessary, but not sufficient condition to data use. Data is used when organizations and frontline workers have a clear understanding for what to do with the information. Much like a nurse working through a mental checklist in response to their patient’s elevated blood pressure, data should connect to specific organizational procedures or processes.

In some organizations we interviewed, data quality was high, but there was uncertainty of how to implement. Managers and frontline workers need to understand how to turn insights into action. Even in high-capacity organizations, data efforts were frequently projects with discrete endpoints, instead of an iterative, replicable process. Leaders can assist in this process by creating clear decision-points, giving frontline workers the authority to act, and establishing this process as the norm.

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8 Peer collaborations in partnership with researchers can shape beliefs and buttress efforts (Dumont, 2015; Coburn, Penuel, & Geil, 2013).

9 Sandfort, Phinney, & Burga, 2017
1. Scripting the moves

In many high-capacity organizations, where data analysis was most widespread, it was a habitual. Members of the organization had trusted performance measures, common practices for data collection, consistent times when they reviewed data, and managers that communicated data up and down the organization. In lower-capacity organizations, there was confusion on what data would be useful and who the audience was (funders, leadership, staff, etc.). This meant lower-capacity organizations often entered data for different audiences into separate databases, adding to workload.

Reams of research has shown that routinization has the impact of decreasing “cognitive load”. Simply put, humans have a limited amount of thinking they can do on a daily basis, and more effortful thinking drains that capacity faster.\(^{10}\) By creating clear, replicable processes, frontline workers can engage in automatic actions, which are less cognitively costly.

In this way, higher-capacity organizations had specific times for entering, pulling, and discussing data. This often took the form of automatic database reports sent to front-line workers’ email and planned check-ins with managers. Lower-capacity organizations noted less internal standards and “staff capacity” for entering data. This means frontline staff have to engage in more effortful thinking when working with data. Higher-performing organizations did not mention lack of staff capacity for data entry; instead, they noted lack of staff capacity for tasks like interpreting and operationalizing findings.

All nonprofits noted that time was limited to take on data-related projects. Several enjoyed the Equity Works project because it created time for the teams to work on small, actionable projects. This time can also cultivate collective norms.

2. Norms to act

Existing research demonstrates that part of data being actionable is related to a clear vision for data management and client outcomes. When frontline workers understand the organizations objectives, they can change their actions to execute that vision. Among our organizations, several organizations used the Results Based Accountability (RBA) framework. This framework sets indicators and that feed into an organization’s mission. The team undertook a RBA framework process together, which has the potential to create buy-in from across the organization. It also clarifies roles, aligns staff task with performance measures, and improves the strength of the metrics.

Some organizations noted they spent considerable time setting strategic goals and outcome measures, but never checked back in on progress. This sent a message to staff that its use is not an enduring organizational practice and led to distrust with data use. While performance measurement systems are a useful way to frame action and align organizations, managers need to actually apply them.

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\(^{10}\) Political scientists as early as Simon (1947) noted bounded rationality. Over several decades, Kahneman and Tversky famously showing those limits in experiments spanning several decades. Recent work, spanning many disciplines, includes Baumeister and Leary, (1995), Evans (2003), Danziger, Levav, and Avnaim-Pess (2011), Mani, et al. (2013), and many others.
When the goals are clear, it makes it easy to act autonomously. This also creates an expectation and understanding of how to act on insights from the data. For example, in reviewing the data, one organization found they were not getting the employment outcomes they anticipated. Upon reflection, the team noted that close relationships to employers seemed to improve those outcomes. The team reviewed data on their highest value-employers and focused resources on strengthening resources on three high-value employers. This reflects a successful chain of hypothesis to data to action. In practice, this process seemed relatively rare.

**Conclusion**

Interviews of workforce development professionals mirrored predictions from the academic literature that in order for data to be a regular input into decision-making, managers and frontline workers must view data as legitimate and actionable. These conditions are necessary for the data use, but, even in experienced organizations, these conditions are not sufficient. Other important conditions, evident in both research and our interviews, include robust database systems, managers with a background and commitment to data use, and clear, measurable performance goals. Long-term collaborations between researchers and networks of practitioners can cultivate these conditions and professional standards around the importance of data use.

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