

State Exchange on Employment and Disability (SEED) Knowledge Development Report: Literature Scan on Implementation Science



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Based upon the recommendation from the Technical Working Group (TWG) and approved by the COR, the Coffey Consulting (Coffey) AIR evaluation team conducted a scan of the implementation science literature. The purpose of the scan was to determine the extent to which implementation science research contained ideas that could enhance the capacity of State Exchange on Employment and Disability's (SEED) to facilitate the adoption of policy and programs ("interventions") by states supported by the U.S. Department of Labor's Office of Disability and Employment Policy (ODEP) and its SEED partners.

OVERVIEW OF IMPLEMENTATION SCIENCE

Implementation science is the scientific study of methods that encourage the systematic integration of evidenced-based practices and research knowledge into policy and practice (Eccles & Mittman, 2006). It examines the economic, political, organizational, social, and behavioral challenges associated with implementing interventions effectively at the system, organization, program, and practice levels, and it seeks to understand the causal relationship between the implementation process and the successful adoption and maintenance of the intended intervention(s) (Fixsen, Naoom, Blase, Friedman, & Wallace 2005; Forman, et al. 2013).

Further, implementation science is a multidisciplinary field with core concepts, processes, and strategies that are common across disparate domains at multiple levels. For more than three decades it has been used to improve program/intervention implementation in many fields (e.g., education, health care, mental health treatment, juvenile justice, prevention, and child welfare) (Fixsen et al., 2005; Forman et al., 2013; Meyers, Durlack, & Wandersman 2012). For example, the Department of Health and Human Services (DHHS) funded a study that explored the usefulness of implementation science to assess early childhood programs and systems, and developed an integrative, stage-based framework that can be used by early childhood practitioners, researchers, and policymakers to evaluate program implementation (Metz et al., 2015). Likewise, the National Institute for Corrections (2016) used implementation science to develop a framework for justice systems to improve system outcomes and collaboration, which resulted in critical positive changes across all interventions in the seven participating counties.

During the 1980s, researchers began to acknowledge the importance of quality implementation and associate its functions and processes with the successful delivery of program interventions. Drawing from numerous case studies, the scope and complexity of implementation research has grown. Initially focused on delineating the differences between implementation and intervention outcomes, this field is now more granular, focusing on the classification of the core elements, contextual factors, and stages that influence implementation (Meyers, Durlack, and Wandersman, 2012). Moreover, implementation science emerged to address program evaluations' historic lack of analysis or study of implementation (Meyers, Durlack, and Wandersman, 2012).

Although the scanned literature proposed a range of implementation phases (e.g., Aarons, Hulburt, & Horwitz, 2011; Fixsen et al., 2005; Metz, Blase, & Bowie, 2008; Saldana, 2014), in general, the three primary stages of implementation (Saldana, 2014) consist of:

1. **Pre-implementation:** identifying an organizational challenge that would benefit from improvement or alternative methods (also called the “exploration” phase). This phase also includes preparing for and adopting an intervention and piloting/refining the intervention (sometimes called the “adoption/preparation” phase);
2. **Implementation:**¹ actively executing the intervention; and
3. **Sustainment:**² maintaining the implementation efforts and possibly expanding or scaling up the intervention. It may also include introducing innovations to the process.

Empirical research has also identified core components of implementation (e.g., Aarons, Hulburt, & Horwitz, 2011; Fixsen et al., 2005; Metz, Blase, & Bowie, 2008; Saldana, 2014), which can be simplified into common elements (Forman et al., 2013):

1. **An innovation:** a research-based new practice or program with demonstrated positive outcomes.
2. **A change agent:** an individual or group who knows about the innovation and is actively trying to implement it.
3. **A social system:** the context and environment in which the implementation process occurs.
4. **A process of communication:** information sharing between change agents and those within the social system.

METHODOLOGY

Between May and July 2016, Coffey/AIR conducted the literature scan using a sample of 90 documents – representing research from the United States, Europe, and Australia – and consisted of peer-reviewed journal articles (61%), policy and research briefs (14%), reports (13%), book chapters (3%), newspaper articles (3%), assessments (2%), a working paper (1%), and a webinar (1%). The majority of the documents came from the fields of health care (28%), education (23%), public policy/management/evaluation (19%), and those focused exclusively on implementation science itself (23%). Although their publication years ranged from 1975 to 2015, more than half (59%) were published after 2010.

Coffey/AIR first reviewed each document and kept those that were of particular relevance to SEED’s work. That is, the team excluded from analysis any documents not specifically related to the field of implementation science, focused more on intervention outcome than the implementation process, or that reported on the creation and testing of intervention

¹ Metz et al. (2008) divided the implementation phase into early implementation, which would include piloting the intervention and then full implementation.

² Aarons et al. (2011) state that there has been little empirical work on the factors that support or limit the sustainability of evidence-based practices in the public sector social services field.

assessments. The team then reviewed the remaining 79 documents to identify approaches and strategies that may help SEED engage more effectively with its intermediary organizations.

FINDINGS

Overall, the scan of the implementation science literature suggests that policy and program implementation are most likely to be successful when those implementing the intervention do one or more of five key things:

1. understand the change process,
2. have a thorough understanding of local contexts and priorities,
3. offer interventions aligned with existing programs and policies,
4. achieve leadership buy-in, and
5. involve stakeholders to promote ownership over the proposed policy or intervention.

The following five sections briefly discuss the research supporting each idea.

View Change as a Process - Prepare the Ground so Seeds Can Take Root

The implementation science literature emphasizes that implementing new program or policy interventions is a process and not a one-time event (e.g., Bertram, Blase, Shern, Shea, & Fixsen, 2011; Economist Intelligence Unit, 2010; Firestone, Fitz, & Broadfoot, 1999; Hall, Dymnicki, Coffey, & Brodowski, 2014; Weaver, 2010). Bertram et al.'s (2011) review of the implementation science literature indicates that successful implementation interventions often involve a two- to four-year process. For example, the California Partners for Permanency (CAPP) is using implementation science to inform a five-year, federally funded project to reduce the number of children in long-term foster care. CAPP's (2012) efforts embrace change as a process, reflected by devoting the first year of the project to research and planning instead of implementing new policies and practices. Giving the project time to understand the local context and engage stakeholders will help CAPP develop an integrated model that reflects child and family practice in the state.

In addition to being a process, implementation is also recursive in that discussion and reflection should be embedded throughout each stage to inform decisions about whether or when to proceed with implementation activities. The Economist Intelligence Unit's (2010) survey of public- and private-sector companies, for example, found that efficient policy implementation required a holistic and iterative approach to intervention planning and application such that each stage of implementation is seen as part of the same process instead of separate tasks. The Unit's interviews found that holistic implementation involves having sufficient resources, organizational capacity to track and learn from mistakes, communication with stakeholders about the purpose of the intervention, and stakeholder involvement in the design and implementation of the intervention. Change agents should keep these considerations in mind as they adopt new interventions and should invest in laying the groundwork needed to ensure that the interventions are implemented efficiently, effectively, and with stakeholder buy-in.

Understand the Local Context - Seeds Not Suited to the Environment Will Not Thrive

The literature suggests that understanding the local context, or the organizational environment, is one important component of ensuring intervention adoption and maintenance. Although most of the implementation science research reviewed for this scan focused on studying how programs and policies are implemented in small organizational settings, like hospitals or classrooms, the following lessons may be generalizable to broader policy interventions:

- Organizational climate contributes to effective implementation (e.g., Caldwell, Chatman, O'Reilly, Ormiston, & Lapiz, 2008; Hunter & Killoran, 2004; Richards, 2007; Weaver, 2010). It is important for change agents to be aware of the local conditions in the target social system and to identify ways to integrate the interventions in a manner consistent with existing concerns.
- Programs are more likely to be maintained when there is alignment between the intervention and the implementation setting, and between the setting and broader ecological system (Chambers, Glasgow, & Strange, 2013). Intervention components (staff, outcomes, delivery) should ideally align with the local context (organizational culture and structure, oversight, staff, technology). A disconnect between the intervention and the intervention site could result in poor intervention delivery and limited staff buy-in, which would affect intervention outcomes and sustainability.
- Honig (2006) recommends investigating the conditions under which policies are implemented and successfully maintained (e.g., for whom, where, when, and why). For example, implementers or researchers may examine implementation sites in which like interventions have been readily and effectively adopted to draw lessons to apply to similar sites.
- Relatedly, it is important to consider the fidelity of implementation and its effect on intervention effectiveness (e.g., Hulleman & Cordray, 2009; Mowbay, Holter, Teague, & Bybee, 2003). That is, when examining the outcomes from an intervention in a specific setting, researchers should examine the extent to which the intervention was rolled out in a manner consistent with the intended model and how deviations might have affected its impact.

Align Interventions with Existing Efforts - Foster Symbiosis not Competition

The literature indicated that implementation is more effective when it is aligned with the existing programs, policies, and priorities of the intervention site(s). Change agents should consider how their proposed interventions or policies fit with the existing initiatives and priorities of the target organization (Bertram et al., 2011; Blase, Kiser, & Van Dyke, 2013). Determining how interventions enhance or diminish the existing efforts could help to determine how best to promote the intervention. Dhaliwal and Tulloch (2012), in their examination of how evidence is incorporated in policymaking, suggest that organizations could offer targeted outreach conferences for policymakers to disseminate research on the proposed policies to “match make” stakeholders and policies. Moreover, clearly articulating the stated goals and conditions of the proposed interventions can reduce mission drift when the interventions are adopted and helps organizations implement them more effectively and uniformly (Weaver, 2010).

Leadership Commitment is Crucial - The Gardener Decides what is Weed versus Crop

Another important component of intervention adoption and maintenance identified in the literature scan was securing commitment and buy-in from leadership (e.g., Hall et al., 2014; Hunter & Killoran, 2004; Metz, Blase, & Bowie, 2007; Weaver, 2010). As observed by Weaver (2010), a lack of organizational commitment can lead implementers to subvert an intervention's implementation such that it is poorly or inconsistently adopted and maintained. Moreover, Hunter and Killoran's (2004) review of the process evaluation literature on neighborhood renewal found that it can be challenging to integrate the goals of an outside intervention into an organization's core mission, and leadership plays a key role in ensuring the intervention and organization are well-aligned. Hall et al. (2014) recommend documenting leadership's long-term commitment to the intervention, making clear the supports that will be provided to the organization and the benefits to be gained for participation/intervention adoption, offering tailored (TA) assistance and coaching customized to the organization's local context, and provide joint planning and problem-solving time for staff.

Engage Stakeholders - Involve the Customers in Deciding what Crops To Plant

Including stakeholders in the intervention adoption and maintenance process was consistently identified in the implementation science literature as a way to positively influence intervention outcomes (e.g., Australia National Audit Office, 2014; Blase, Fixsen, Sims, & Ward, 2015; Coburn, 2003; DeGroff & Cargo, 2009; Hunter & Killoran, 2004; May & Winter, 2009; Metz et al., 2007; Nilsen, Stahl, Roback, & Cairney, 2013; Richards, Blackstock, & Carter, 2007; Shea, Jacobs, Esserman, Bruce, & Weiner, 2014; Weiner, 2009; Weiner, Belden, Bergmire, & Johnston, 2011). These lessons may be of particular relevance to SEED:

- Coburn's (2003) review of literature on scaling school reform efforts suggested that organizations should create conditions to shift the ownership of the reform efforts onto the stakeholder, such as offering professional development opportunities and training so that intervention users could own the decision-making process.
- Likewise Hunter and Killoran (2004) found that stakeholders' views on the implementation process were critical to the success of the intervention, and recommend that organizations invest in building the infrastructure and capacity to share research nationally, regionally, and locally as well as offer technical support to help connect stakeholders with relevant materials. In doing so, stakeholders are able to: make more informed decisions about the intervention, understand how it may align with or even extend their existing efforts, recognize the need for change, and improve intervention adoption, maintenance, and sustainability.
- The Australia National Audit Office's (2014) "Better Practice Guide" on successful implementation of policy initiatives recommends engaging stakeholders in a variety of traditional and contemporary methods: town hall meetings, focus groups, surveys and questionnaires, consulting committees and working groups, video and audio broadcasts, online seminars and workshops, internet forums, and social media outlets. Stakeholder engagement can be used to secure local buy-in for the proposed intervention, or generate feedback to help shape intervention implementation.

- DeGroff and Cargo (2009), in their book chapter on policy implementation, recommend that evaluators conduct a network analysis to determine key champions and saboteurs who might impact intervention adoption and maintenance.
- Another benefit of engaging stakeholders is to manage their expectations about the intervention (Richards et al., 2007). It is important to set clear objectives at the outset of the intervention so that stakeholders understand what the intervention is intended to achieve, who is involved, how it will work, and the stakeholder's role in the implementation process.

IMPLICATIONS FOR THE SEED INITIATIVE

This section highlights some implications of the literature scan for the present activities and for the ongoing SEED initiative moving forward. In large part, the literature validates many aspects of the approach taken by the SEED implementation team. A number of actions taken by the SEED implementation team or evaluation team to date are supported by this scan of the implementation science literature. Some important examples include:

- Laying the groundwork for policy change by reaching out to stakeholders: Establishing shared priorities between ODEP and the intermediaries, developing a National Policy Framework, and including individuals' personal stories in Task Force meetings are examples of taking time to prepare for change before rushing directly to solutions or implementation (as per finding number 1).
- Engaging the stakeholders and making this largely a legislator-driven process. This is consistent with the research suggestions on stakeholder ownership and leadership and should ultimately increase the chances of policy adoption (as per findings number 4 and 5).
- Engaging leadership of intermediaries and states. This has been a SEED priority with positive support from DOL leadership. This is consistent with the need noted in the literature to engage leadership in the target organization (finding number 4).
- Building capacity of stakeholders so they have ownership of the policy and change. ODEP has begun to build the capacity of intermediaries to aid members on disability employment issues, and the intermediaries will likewise assist with technical assistance for the states to build capacity. This is consistent with the need for leadership buy-in and engaging stakeholders highlighted in the literature (findings number 4 and 5).
- The formative evaluation undertaken as SEED has been evolving provides feedback for SEED, and the planned survey will obtain stakeholder feedback and include a partial network analysis, as supported by implementation science research. The future key state staff and intermediary interviews will likewise provide another important opportunity for information gathering and feedback (finding number 5).

Implications and things to consider for the SEED implementation team going forward that emerge from this literature scan are generally consistent with the intentions expressed by the

SEED implementation team. While taking these actions cannot ensure success, the literature suggests these may be the ways to maximize the likelihood of successful adoption and implementation of the desired disability employment policies:

- Take a medium- to long-term view. Despite the desire for “quick wins” and moving to implementation, to date, SEED has been willing to focus on laying the groundwork. Literature suggests a 2-4 year timeline is realistic for sustained change. There will be a need in some states to promote the policies and their benefits, and build capacity before change policies can be adopted and implemented. Different aspects of the SEED effort could be considered in the pre-implementation stage or implementation phases. SEED should continue resisting the temptation to rush through the *pre-implementation phase* as it rolls out the National Policy Framework to assist states in implementing policy recommendations.
- Continue viewing the effort as recursive, seeking feedback at each step and adjusting as necessary based on stakeholder feedback.
- Continue to reach out to stakeholders (including legislators, their staff, disability employment advocacy groups, relevant experts, etc.) in a variety of methods and media to engage, inform, and receive input. The processes of distributing the National Policy Framework and providing TA will, obviously, be critical opportunities for engagement.
- Tailor the message for each state (or groups of states if possible) when engaging state legislators on policy options, seeking to fit into their on-going initiatives. The SEED implementation team has noted the intention to engage states “where they are” and find the themes that fit into their current context. The research validates this approach. The “policy matchmaking” conferences mentioned above may be one method to do this.
- Examining states that have successfully implemented elements of the National Policy Framework already will help to further identify successful strategies and necessary conditions for adoption. Example states were included in the National Policy Framework, and those states might be fertile sources of information for the SEED implementation team on how to successfully adopt and implement these policies.
- As legislators express an intention to adopt policy, documenting their commitment or publicizing this intention (with permission) may lead to deeper commitment. At the same time, promote what SEED has to offer *to them* in terms of research, information, TA, and support to states interested in adopting policy.
- Be aware of the line between taking local context into account, and deviating from fidelity to a proven model. When measuring outcomes from policy implementation, consider fidelity to proven model policies and how any deviations may have impacted the results.

Continuing to keep these research-based suggestions in mind as SEED continues into stages later in *pre-implementation* and into *implementation* and *sustainment* will maximize the likelihood of success in promoting change in disability employment policy at the state level.

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