

Implementation and Improvement Sciences

Working together to produce socially significant outcomes

Commonalities and Complements



Use teaming structures

Network Improvement Communities and Linked Implementation Teams use data to identify needs, develop theories of action, and follow iterative cycles of improvement that prioritize implementers' voices in planning and problem solving.



Use a variety of data

Both sciences use data related to process, fidelity, context, organizational factors, and stakeholder input to drive problem solving and decision making.



Focus on systems

Both approaches are system focused. Improvement science focuses on factors outside individuals while implementation science focuses on roles, structures, and functions that support capacity to use a practice with fidelity.



Use improvement cycles

Repeated Plan-Do-Study-Act (PDSA) cycles answer questions (*What are we trying to accomplish? How will we know that a change is an improvement? What change can we make that will result in improvement?*) to learn and improve practices and systems as a result of change.



Start small across varied contexts

Both sciences propose starting small with learning from PDSA cycles before scaling using either a Transformation Zone or Improvement Project methodology to develop capacity, refine the practice, and build readiness before scaling.



Focus on practitioner level needs

Both sciences emphasize use of a systemic selection process. Improvement science identifies high leverage problems and related solutions. Similarly, implementation science examines fit and need of systems, practices, and users.

Implementation Science

"Methods or techniques used to enhance the adoption, implementation, and sustainability" of a practice (Proctor et al., 2013).

- Systems are central focus of support for effective use of practices
- Uses bi-directional feedback loops
- Practices selected based on local need and fit
- Aligns initiative and leverages resources to meet coherent goals
- Iterative cycles of data guide improvement
- Follows a stage-based approach to change

Improvement Science

A methodology that uses cycles of inquiry to learn what is needed to improve practice (Bryk et al., 2015).

- Problem specific and user focused
- Address variation in performance
- Cannot improve what cannot be measured
- Anchors improvement in disciplined inquiry
- Sees the system
- Accelerates improvement through Networked Communities

"The goal is not to answer factual questions about what is, but rather to determine what is required."

— National Implementation Research Network, 2015
Implementation Science

"They knew what they wanted to happen but were now trying to figure out how to get it to happen."

— Bryk et al., 2015
Improvement Science

References

Bryk, Anthony S., Gomez, Louis M., Grunow, Alicia, & LeMahieu, Paul G. (2015). *Learning to improve: How America's schools can get better at getting better*. Harvard Education Press.

Fixsen, D., Blase, K., Metz, A., & Van Dyke, M. (2015). *Implementation science*. In J. D. Wright (Ed.), *International encyclopedia of the social and behavioral sciences* (2nd ed., Vol. 11, pp. 695–702). Elsevier.

Proctor, E.K., Powell, B.J. & McMillen, J.C. (2013). Implementation strategies: recommendations for specifying and reporting. *Implementation Science*, 8, 139. <https://doi.org/10.1186/1748-5908-8-139>

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