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Executive Summary

Rapid Cycle Evaluation in Education: A Practical Framework for Its Processes

Problem

In recent years, Rapid Cycle Evaluation (RCE) has emerged as a critical methodology for enhancing effectiveness in real time. Despite the increasing popularity of Rapid Cycle Evaluation, much of the existing literature fails to adequately define RCE or outline its specific processes. The criteria distinguishing an evaluation as part of the rapid-cycle evaluation methodology remain unclear. This literature review intends to address this gap by examining and synthesize the application of RCE within the educational context to develop a comprehensive framework for the RCE process.

Solution

A targeted search was conducted. The primary search term "Rapid Cycle Evaluation" yielded 78 hits. The secondary search term explored the application of Rapid Cycle Evaluation (RCE) in the education sector. The search included the terms "Rapid Cycle Evaluation in Education," "Plan-Do-Study-Act in Education," and "Continuous Quality Improvement in Education." Ultimately, eleven articles spanning various fields were selected, contributing to the refinement of the framework and offering valuable insights on how RCE can be operationalized in educational settings.

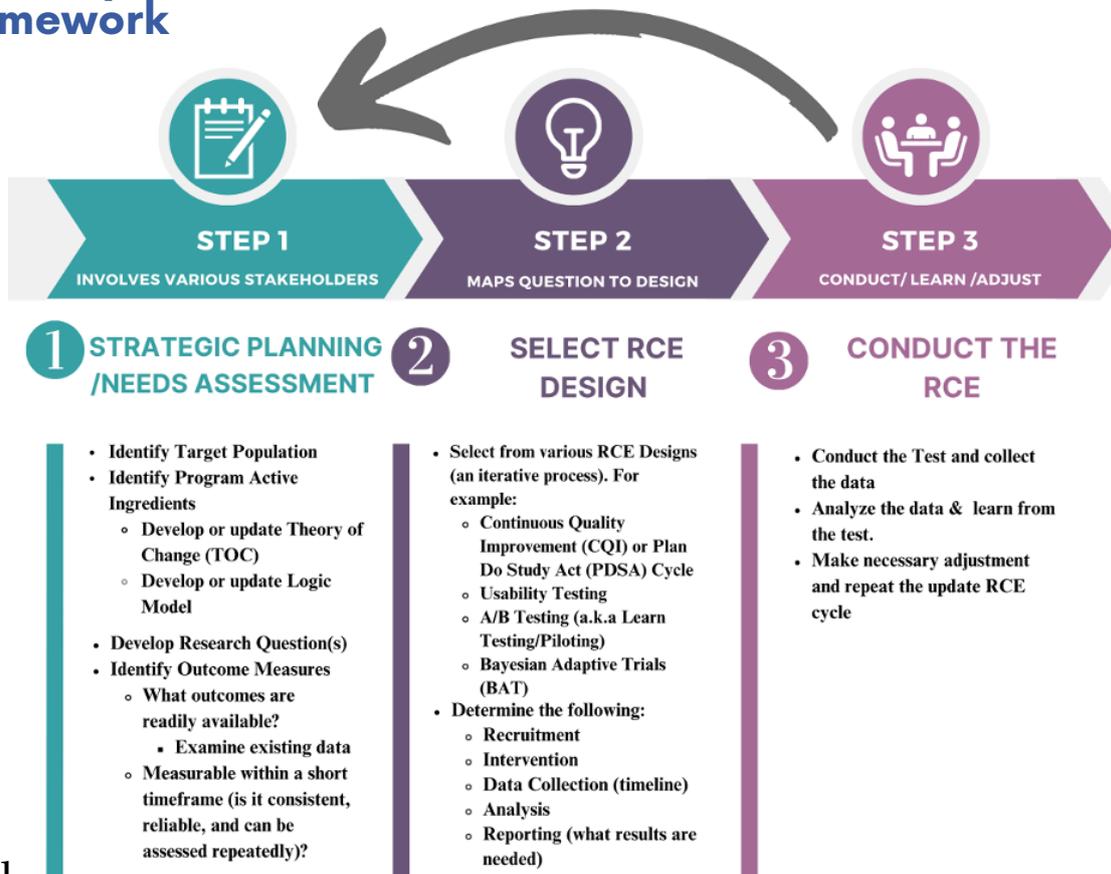### What is Rapid Cycle Evaluation?

Rapid Cycle Evaluation (RCE) is an evaluation method that allows users to swiftly assess the effectiveness of specific interventions or programs, implement immediate improvements, and reassess outcomes. At its core, Rapid Cycle Evaluation consists of two key components: rapid feedback and continuous improvement (Atukpawu-Tipton & Poes, 2020; Bagby & Rangarajan, 2023; Cody & Asher, 2014; Resch, 2017; Skillman et al., 2019).

Rapid feedback is the process of collecting, analyzing, and disseminating information regarding the performance of a program, intervention, or initiative. Its primary objective is to quickly identify what is effective and what requires enhancement. This tool is vital for organizations, enabling them to respond promptly to data and make informed decisions. Conversely, continuous improvement refers to the incremental modifications made to processes, products, or systems based on feedback. Together, these two components, rapid feedback and continuous improvement, constitute the essence of Rapid Cycle Evaluation (Atukpawu-Tipton & Poes, 2020; Cody & Asher, 2014; Skillman et al., 2019; Vindrola-Padros, Brage & .Johnson, 2021).

Essential Takeaways

- RCE can be integrated into existing evaluation frameworks, allowing foundations to build on their current practices.
- Certain RCE designs, like Plan-Do-Study-Act (PDSA) cycles, can be conducted internally with minimal cost, making it accessible for foundations with limited budgets.
- RCE promotes active involvement of stakeholders, ensuring evaluations align with the needs and goals of all parties involved.
- Analyze Current Practices: Assess your current evaluation practices and identify gaps where RCE could add value.
    - Current evaluation capabilities
    - Staff expertise
    - Technological tools
    - Data systems

Rapid Cycle Evaluation Framework

STEP 1
INVOLVES VARIOUS STAKEHOLDERS

STEP 2
MAPS QUESTION TO DESIGN

STEP 3
CONDUCT/ LEARN /ADJUST

1 STRATEGIC PLANNING /NEEDS ASSESSMENT

- Identify Target Population
- Identify Program Active Ingredients
  - Develop or update Theory of Change (TOC)
  - Develop or update Logic Model
- Develop Research Question(s)
- Identify Outcome Measures
  - What outcomes are readily available?
    - Examine existing data
  - Measurable within a short timeframe (is it consistent, reliable, and can be assessed repeatedly)?

2 SELECT RCE DESIGN

- Select from various RCE Designs (an iterative process). For example:
  - Continuous Quality Improvement (CQI) or Plan Do Study Act (PDSA) Cycle
  - Usability Testing
  - A/B Testing (a.k.a Learn Testing/Piloting)
  - Bayesian Adaptive Trials (BAT)
- Determine the following:
  - Recruitment
  - Intervention
  - Data Collection (timeline)
  - Analysis
  - Reporting (what results are needed)

3 CONDUCT THE RCE

- Conduct the Test and collect the data
- Analyze the data & learn from the test.
- Make necessary adjustment and repeat the update RCE cycle

STEP 1
Beyond the core elements of rapid feedback and continuous improvement, the RCE process adheres to a structure similar to traditional evaluation methods. The initial step in RCE consists of strategic planning or a needs assessment. A needs assessment identifies specific problems within a target population or system (Chyung, 2015), while strategic planning offers a roadmap to address those identified needs. Both steps are essential for ensuring that the evaluation is precisely targeted and anchored in the specific context of the program or system (Cody & Asher, 2014). A fundamental aspect of RCE, particularly during strategic planning and needs assessment, is the involvement of stakeholders (Makgamatha, 2009). Anker et al. (1993) identified the formation of a 'core team' compromising program implementers, evaluators, and critical individuals with a vested interest in or influence over the program as essential for the success of RCE.

STEP 2
After establishing the core team and completing the strategic planning and needs assessment, the second phase of the RCE process involves selecting the most suitable evaluation design. This is an iterative process; the initial research question often corresponds with multiple potential designs. However, through ongoing stakeholder engagement, the research question can be refined, leading to a clearer alignment with the most appropriate design for a targeted and effective evaluation (Bagby & Rangarajan, 2023; Cody & Asher, 2014).

STEP 3
Phase three of the RCE framework centers on executing the planned intervention. With recruitment, implementation, data collection, analysis, and reporting procedures established in phase two, this phase involves carrying out the intervention, collecting data, and analyzing results to inform any necessary refinements. The goal is to derive actionable insights from the data and implement timely, evidence-based actions. It may include adjusting the intervention to improve its effectiveness. Modifications are made if the data indicates that the intervention is not meeting the expected outcomes.

References

Atukpawu-Tipton, G., & Poes, M. (2020). Rapid Cycle Evaluation at a Glance (OPRE Report #2020-152). Office of Planning, Research, and Evaluation, U.S. Department of Health and Human Services.

Bagby, E., & Rangarajan, A. (2023). Using Rapid-Cycle Evaluation to Improve Program Design and Delivery.

Cody, S., & Asher, A. (2014). Proposal 14: Smarter, Better, Faster: The Potential for Predictive Analytics and Rapid-Cycle Evaluation to Improve Program Development and Outcomes. Policies to Address Poverty in America, 147-156.

Holzwart, R., Skinner, R., & Wright, D. (2019). Understanding Rapid Learning Methods: Frequently Asked Questions and Recommended Resources (OPRE Report 2019-89). Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Johnson, K., Gustafson, D., Ewigman, B., Provost, L., & Roper, R. (2015). Using Rapid-Cycle Research to Reach Goals: Awareness, Assessment, Adaptation, Acceleration (AHRQ Publication No. 15-0036). Agency for Healthcare Research and Quality (AHRQ).

Nightingale, D. S., Amin, S., & Perez-Johnson, I. (2023). Using Rapid-Cycle Experiments to Improve Labor Programs in the United States. In A. Rangarajan (Ed.), The Oxford Handbook of Program Design and Implementation Evaluation.

Resch, A. (n.d.). In Focus - by Mathematica: Rapid-Cycle Evaluation. Mathematica.

Schneeweiss, S., Shrank, W. H., Ruhl, M., & Maclure, M. (2015). Decision-Making Aligned with Rapid-Cycle Evaluation in Health Care. International Journal of Technology Assessment in Health Care, 31(4), 214-222.

Shrank, W. (2013). The Center for Medicare and Medicaid Innovation's Blueprint for Rapid-Cycle Evaluation of New Care and Payment Models. Health Affairs, 32(4), 807-812.

Skillman, M., Cross-Barnet, C., Friedman Singer, R., Rotondo, C., Ruiz, S., & Moiduddin, A. (2019). A Framework for Rigorous Qualitative Research as a Component of Mixed-Method Rapid-Cycle Evaluation. Qualitative Health Research, 29(2), 279-289.

Vindrola-Padros, C., Brage, E., & Johnson, G. A. (2021). Rapid, Responsive, and Relevant?: A Systematic Review of Rapid Evaluations in Health Care. American Journal of Evaluation, 42(1), 13-27.