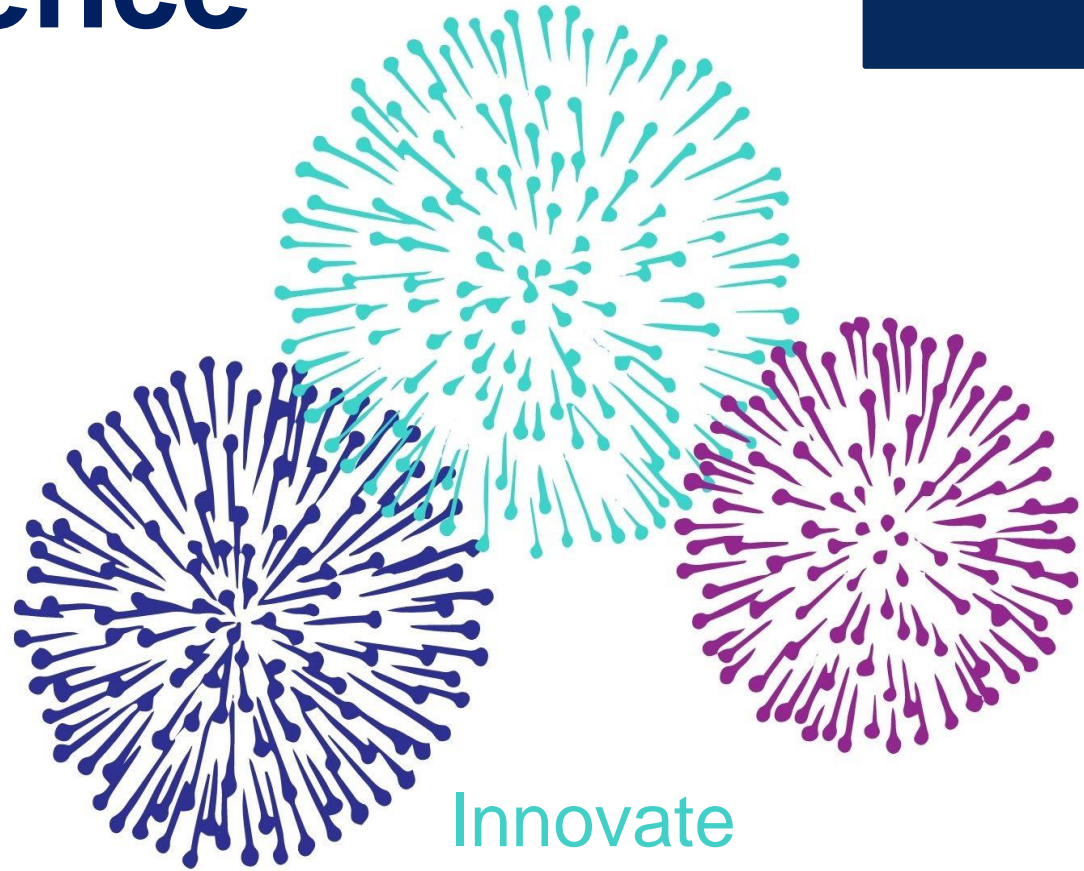


Lean HE International Online Conference 2021

20-22 October



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The Successful Implementation of LHE Depends on What Happens During the RIE: A Framework for Understanding & Improvement

Presenters:

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Based on manuscript under review by W. Balzer, C. Kluse, C. Shannon, M. Shilov

Objective of the Presentation

Explores how steps taken before, during, and after the implementation of a Rapid Improvement Event (RIE) may affect the success of Lean higher education

Poll Question

Have you:

- (a) Participated in an RIE
- (b) Facilitated an RIE
- (c) Aware of an RIE at your Institution
- (d) Have no experience with RIE
- (e) I don't even know what RIE is

Background for the Study

Lean in Higher Education – Overview

- » RIE = Rapid Improvement Event = Kaizen Event = Kaizen Blitz
- » Interest in Lean in higher education – increased in past 20 years
- » Many Lean practices applied – RIE most popular
 - » RIE focus – HE administrative processes
 - » A growing interest in applying RIE to teaching, scholarly, etc.
- » RIEs in HE not always successful
 - » Limited documented failure (RIE) in literature

Lean in Higher Education – Overview

- » Causes of Lean failure documented, but are broad and general
 - » leadership, culture, etc.
- » Suggests a need for a new perspective on LHE failure
- » RIE popularity warrants a look at effectiveness of RIE
- » RIE success → Lean success in HE
- » Framework for understanding RIE role in LHE

Q1 – Respond in Chat

What is your experience and/or feedback with RIE? What projects have you completed using RIE, and what were the results?

LHE Success - Failure

- » Balzer et al. (2016) – 64 publication reviewed – mostly positive testimonials
 - » Case Study (52%), conceptual (32%), empirical (9%)
- » Empirical studies – no direct assessment of effectiveness of LHE
 - » Conclusions not metric based
- » Assessment of the effectiveness of LHE implementation needed

LHE Success - Failure

- » Lean failure rate speculated to be 50% to 95%
 - » Empirical studies lacking to support these values
- » Are institutions of HE less likely to publicize failure?
 - » Journals prefer positive outcomes?
 - » Failure = reflection = improvement - CI philosophy - trial & error
 - » Structured problem solving - identification of effective countermeasures

Factors Contributing to Failure

- » Project selection/prioritization, lack of resources, training, high \$\$, etc.
 - » Albliwi et al. (2014) - 56 papers reviewed - 34 common factors
- » Tool set vast, disconnect between lean & business strategy, lean expert departure
 - » Sony, Naik, & Therisa (2019) - 11 factors
- » Team size, communication, scope creep, resistance to change
 - » Anthony & Gupta (2019)- top 10 list

Factors Contributing to Failure

- » Lean as disjointed set of projects vs coherent implemented business strategy initiative
 - » Deluzio, 2020; Radnor & Osborne, 2013; Sunder, 2013
- » Poor allocation of lean tasks between specialists and leaders
 - » Secchi & Camuffo 2019
- » Organic vs mechanistic lean perspective
 - » Liker, 2020

Review of Q1 Responses

What is your experience and/or feedback with RIE? What projects have you completed using RIE, and what were the results?

Conceptual Framework for Understanding & Improving RIE Effectiveness

Role of RIE in Lean Failure

- » RIE – three-phase model – Balzer (2020)
 - » 3 chronological phases
- » Based on consolidation of practices at 7 US/UK universities
- » Decisions at each phase can affect RIE and overall Lean implementation
- » RIE most common tool in LHE – thus problems in any phase limit RIE as well as holistic Lean success

Conceptual Framework RIE

Institutional Practices

Workplace Climate

Leadership Practices

Strategic Plans

Job Design and Roles

Organizational design and Structure

Communication Practices

Personnel Practices

Power and Influence

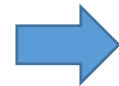
Team Design and Roles

Decision-Making

Motivation and Reward Practices



Phase I. Before the RIE



Phase II. During the RIE



Phase III. After the RIE

Q2 – Respond in Chat

What factors during the RIE do you think may contribute to RIE success/failure?

Conceptual Framework RIE

Phase 1 - Before the RIE

- Identify the Process Targeted for Improvement
- Organize the RIE Team
- Train the RIE Team
- Scope the RIE Process
- Identify What the Beneficiary of the Process Values and Expects
- Establish Metrics for Documenting RIE Improvements
- Gather Information on the Process Before Conducting the RIE
- Logistical Preparation for the RIE

Examples - Phase 1

» Train the RIE Team

- 1) The content, design, and delivery of LHE training may contribute to the failure of the RIE
 - Deficient training content - examples of waste not aligned with environment, process map incomplete/unclear, partially completed or rushed
- 2) Inadequate training of the RIE facilitator
 - Limited knowledge of LHE principles, undeveloped facilitation skills

Examples – Phase 1

» Establish Metrics for Documenting RIE Improvements

- LHE failure may occur when the RIE does not include adequate metrics to assess & document improvements to the process
 - failure to state operational delivery data (e.g., cycle or lead time, number of steps) for the current process will make it difficult for team members to prioritize solutions to improve the process
 - failure to include and gather performance on critical RIE metrics will make it difficult to communicate benefits of the proposed “future state” process to better motivate and engage constituents

Conceptual Framework RIE

Phase 2 - During the RIE

- Validate RIE Preparation Tasks
- Overview of the RIE and LHE
- Review Baseline Performance of “Current State” Process
- Document Visual Map of “Current State” Process
- Understanding Waste and Impediments to Flow
- Analysis of “Current State” Process
- Develop Improvement Ideas
- Prioritize Improvement Solutions
- Propose “Future State” Process Map
- Test and Verify the Proposed “Future State” Process
- Finalize Visual Map of “Future State” Process
- Establish Implementation Plan for “Future State” Process
- Confirm Accountabilities for Implementing “Future State” Process
- Identify Post-Implementation Activities to Sustain “Future State” Process
- “Report Out” by RIE Team

Examples - Phase 2

» Document Visual Map of “Current State” Process

- LHE failure can occur when team members are not actively engaged in creating the visual map
 - Previously developed map was shared with team for review
 - Overzealous facilitator develops map
 - Inexperienced facilitator unable to guide team and capture accurate map
- *“You cannot be sure you really understand any part of a business problem unless you go and see for yourself firsthand. It is unacceptable to take anything for granted or to rely on the reports of other” - Liker 2004*

Examples – Phase 2

» Analyze the Current State Process

- LHE failure can occur when the analysis of the current state process is superficial and fails to bring all wastes and impediments (and their root cause) to the surface results in a more limited understanding
 - Rushing analysis
 - Limited training
 - Poor facilitation
 - Ignoring politically or personally sensitive problems

Conceptual Framework RIE

Phase 3 – After the RIE

- Reaffirm Leadership Support to Implement the New Process
- Establish Implementation Team to Implement the New Process
- Implement and Monitor the New Process
- Promote and Recognize the New Process
- Embed Clear Expectations to Sustain the Improved Process
- Embed Organizational Structures to Sustain the New Process
- Embed Intrinsic and Extrinsic Motivation to Sustain the New Process
- Embed Continuous Improvement Practices to Sustain the New Process

Examples - Phase 3

- » Implement and Monitor the New Process
 - » Decay in local leadership support over time since the beginning of the RIE may contribute to LHE failure if that level of support has declined or is withdrawn as the new “future state” process is implemented
 - » Failure to ensure ongoing participation of a leader with authority who can promote change for the new process will impede or delay the new process.

Review of Q2 Responses

What factors during the RIE do you think may contribute to RIE success/failure?

Summary of Conceptual Framework for Understanding & Improving RIE Effectiveness

Summary: A Framework for Understanding & Improving

- » Many factors affect Lean implementation
- » Absence of framework may stifle LHE research and application
- » Our framework focuses exclusively on RIE
- » Objective: Explores how steps taken before, during, and after the implementation of a Rapid Improvement Event (RIE) may affect the success of Lean higher education

Summary: A Framework for Understanding & Improving

- » Framework intent – examine how decisions in each RIE phase affect LHE, either positive or negative
 - » Example: significant misunderstanding of current state → snowball effect resulting in wasted time, lack of improvement
 - » Less consequential error – can lead to:
 - » RIE not meeting expectations of stakeholders
 - » RIE fails to engage team members who execute the process
 - » Limiting of institutional improvement

Summary: A Framework for Improving Practice

- » RIE practices should not be taken lightly – careful thought, planning at each phase
- » Guidance from evidence-based research is lacking
- » Utilize history of lean research to guide RIE's
 - » Balzer (2020) – synthesis of best practice in 3 phases of RIE
 - » Yorkstone (2020) – vast recommendations – approaches/tools for RIE

Summary: A Framework for Improving Practice

- » Experts outside HE provide guidance on RIE
- » Practices are adaptable to HE (Cunningham (2007), Hafey (2017), Imai (1997), & Lareau (2003))
- » Importance of failure (potential) recognition
 - » Can help facilitators/sponsors respond and keep RIE from *derailing*
 - » Example - failure to generate support of local leaders greatly affects implementation of future state

Summary: A Framework for Improving Practice

- » Example - analyze report out phase using structured method such as FMEA
 - » Can identify potential risk/problems/countermeasures
- » Example - if failure occurs - use structured tools such as 5-why, or cause/effect
- » Limited Lean approach without pillars of CI - initial results promising not sustained (Balle & Garcia-Mella, Chartier & Paoli)
- » Only focusing on RIE - may not provide long term results

Summary: The Role of Institutional Practices

- » Framework targeted the RIE – however, it considers that institutional practices may affect the entire RIE process
 - » Example – strategic plan clearly identifies project selection process
 - » Poor leadership could compromise scoping (Phase 1)
 - » Testing and verifying future state (Phase 2), and
 - » Leadership support to implement and sustain future state (Phase 3)
- » Institutional practices affecting RIE are worthy of future research

Limitations & Future Work

Limitations & Future Work

- » Framework & research relies on case studies, self-report, survey, insights & personal perceptions
- » Empirical based research needed
- » Lean *implementation* success, Lean *implementation* failure...
 - » No accepted definition
- » Vienazindiene & Cairneine (2013) – use the term “**Progress**”

Limitations & Future Work

- » Lean success or failure – multifaceted – better to evaluate on a continuum vs dichotomy (success OR failure)
- » Lack of metrics that affect stakeholders
- » Understanding factors that influence lean success/failure
 - » We would greatly benefit from a clearly articulated definition
 - » As a whole, or at minimum, by each author/researcher

Questions/Responding to chat comments



We hope to see you in 2022!

Lean HE International Conference 2022

» 19 – 21 October 2022.
Melbourne

