Organizational Learning and Lean in Higher Education

2015 Lean Higher Education (HE) Hub Conference
University of Waterloo, Canada

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Workshop Format

• Introduction
• Topic Background
  • Definitions/Literature Review
• Conceptual Framework
• Share Experiences, Expert Groups
• Theme Development
Introduction

• David Francis background
  • Professional: Community College and IT Leadership, ASQ
  • Academic: Ph.D. studied Lean in HE
  • Lean Practitioner: Green Belt Projects in Academic Improvement
Formulating Questions

• We know what learning is, we know what organizations are – but is there such a thing as organizational learning – and if so, what is particular about it in higher education?
Formulating Questions

• In Lean HE, where does the learning occur? How does it accrue? At which organizational level does it exist?
• What encourages such learning? What discourages such learning?
• What events or practices extinguish learning for better or for worse?
Formulating Questions

• When people work on Lean improvement projects how do they perceive individual or group learning?
• Does this differ for Lean leaders and Lean participants?
• Do they consider learning to be an input or resource for improvement?
Formulating Questions

• Is OD or HR dead as some writers have posited?
• HR has radically changed at Netflix and Amazon – what about HE?
HR is dead, long live OD – or why organisational development may be all that’s left for in-house HR

Ed Griffin, 11 Aug 2011

Outsourced HR has often suffered a bad press – and for a variety of reasons. These have included the complaint that the meter is always running, so any little extra you ask for leads to another bill. There have also been criticisms that the outsourced processes don’t work and fail to reflect the needs of the business. Perhaps the application of a little critical thinking (something sadly lacking in many HR teams in the past) can highlight some simple ways of ensuring that out-sourcing HR does deliver the value.
Situational Questions

• Where does the drive for Lean improvements come from?
• In the Province of Saskatchewan, Canada, Lean is mandated across all government and government-associated organizations.
• Should HE be so close to its funders?
Saskatchewan

- Canadian Prairie
- Small population (1M), resource-based economy (Oil, Gas, Potash)
- Importance of PS attainment, both aboriginal and non-aboriginal
Studying Lean in HE

- Core Perspectives – Literature review focused publications about:
  - Efficiency
  - Lean in Higher Education
  - Organizational Learning
Efficiency

• Starts from the worker efficiency level (Taylor) through the bureaucratic view (Weber).

• Japanese model (Lean): Redefining how employers form relationships with employees and how improvements are sought over the longer term.
Organizational Learning

• Has been proposed in a number of ways in academic literature and in management science/practice.
• Interestingly, a systems view for organizational learning has been influential ...
• ... which aligns with systems-views of how improvement should occur.
Senge’s Fifth Discipline

• Proposed different disciplines for organizational learning.
• Personal mastery, mental models, shared vision, team learning and systems thinking.
• Systems thinking is the so-called “fifth discipline”.
Organizational Learning

• “a group of people working together collectively to enhance their capacities to create results they really care about” (Fulmer & Keys, 1998).
Variations on a Theme

- Institutional Intelligence (DiMaggio & Powell)
- Individual vs. Group Learning Tensions (Bolman & Deal)
- Socially Constructed Learning (Brown & Duguid)
- Communities of Practice (Wenger)
Lean in HE

• You can sort research literature from three organizational levels:
  • Institutional
  • Departmental
  • Individual
Institutional

- Worldwide literature that suggests requirements and best practices for new or expanding Lean HE initiatives.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Format</th>
<th>Nature of Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antony</td>
<td>2014</td>
<td>Research article</td>
<td>Suggested readiness factors for higher education institutions considering the use of Lean or Six Sigma for improvement.</td>
</tr>
<tr>
<td>Antony, Krishan, Cullen &amp; Kumar</td>
<td>2012</td>
<td>Research article</td>
<td>Studied UK universities; claimed Lean and Six Sigma should be used together for effective results.</td>
</tr>
<tr>
<td>Balzer</td>
<td>2010</td>
<td>Book</td>
<td>Case studies and theory for university settings. Emphasis on cultural sensitivity with need to differentiate between local and institution-wide Lean initiatives.</td>
</tr>
<tr>
<td>Barton &amp; Yazdani</td>
<td>2013</td>
<td>Research Article</td>
<td>Noted importance of transparency, clear levels of reporting, clear ownership of improvement projects and linking Lean</td>
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<td>Author(s)</td>
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<td>Description</td>
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<tr>
<td>Clayton</td>
<td>1995</td>
<td>Research article</td>
<td>Described UK university moving from TQM to Kaizen methods. Analysis of how quality initiatives should be governed and focused on future results.</td>
</tr>
<tr>
<td>Comm &amp; Mathaisel</td>
<td>2000</td>
<td>Research article</td>
<td>Adapted a framework from aerospace industry to assess Lean implementations in higher education.</td>
</tr>
<tr>
<td>Comm &amp; Mathaisel</td>
<td>2003</td>
<td>Research article</td>
<td>Proposed continuous improvement for sustainability of higher education via Lean framework based on nine principles.</td>
</tr>
<tr>
<td>Comm &amp; Mathaisel</td>
<td>2005a</td>
<td>Research article</td>
<td>Studied administrator perceptions about process improvement at New England universities, compared with framework in previous article.</td>
</tr>
<tr>
<td>Comm &amp; Mathaisel</td>
<td>2005b</td>
<td>Research article</td>
<td>Exploratory study of New England university administrators’ views on process improvement.</td>
</tr>
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<tr>
<td>Flummerfelt &amp; Banachowski</td>
<td>2011</td>
<td>Research article</td>
<td>Qualitative study of higher education administrators to identify areas of highest concern when undertaking institutional improvement initiatives.</td>
</tr>
<tr>
<td>Francis</td>
<td>2014</td>
<td>Research article</td>
<td>Publication linking organizational learning to Lean in higher education.</td>
</tr>
<tr>
<td>Hignite</td>
<td>2010</td>
<td>Research article</td>
<td>Case study describing institutional improvement and importance of executive leadership.</td>
</tr>
<tr>
<td>Hines &amp; Lethbridge</td>
<td>2008</td>
<td>Research article</td>
<td>Literature survey and proposed metaphor for Lean implementations in higher education emphasizing the link between Lean projects and institutional strategy.</td>
</tr>
<tr>
<td>Kang &amp; Maryonge</td>
<td>2014</td>
<td>Research article</td>
<td>Described improvements in terms of how they affect students, research and staff. Specific examples provided to address different types of waste.</td>
</tr>
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<tr>
<td>Langer</td>
<td>2011</td>
<td>Master’s thesis</td>
<td>Case studies of three large UK universities that have implemented Lean.</td>
</tr>
<tr>
<td>Salewski &amp; Klein</td>
<td>2009</td>
<td>Research article</td>
<td>Described stages of incremental Lean deployment in higher education.</td>
</tr>
<tr>
<td>Simons</td>
<td>2013</td>
<td>Research article</td>
<td>Summarized benefits of Lean in higher education broadly in terms of benefits and links to core institutional activity.</td>
</tr>
<tr>
<td>Sinha &amp; Mishra</td>
<td>2013</td>
<td>Research article</td>
<td>Described higher education challenges in India with recommendations on how to implement Lean based on how people work, connect and operate.</td>
</tr>
<tr>
<td>Xerox</td>
<td>2004</td>
<td>White paper</td>
<td>Described benefits of Lean and Six Sigma used together in higher education.</td>
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</table>
Departmental

• Exactly as stated: what happens when Lean is used at the departmental or school level in HE.
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<tr>
<td>Behm et. al.</td>
<td>2010</td>
<td>Research article</td>
<td>Described situated examples of improvements in a business school and risk factors to consider when planning or implementing Lean.</td>
</tr>
<tr>
<td>Doman</td>
<td>2011</td>
<td>Research article</td>
<td>Described undergraduate business students using Lean to improve a grade entry process at their own institution.</td>
</tr>
<tr>
<td>Finn &amp; Geraci</td>
<td>2012</td>
<td>Research-based report</td>
<td>Reported on use of Lean in the financial departments of four North American universities.</td>
</tr>
<tr>
<td>Moore, Nash &amp;</td>
<td>2007</td>
<td>Monograph</td>
<td>Case study at University of Central Oklahoma. Described “Lean University”: a four-step process in projects relating to four functional areas of the university.</td>
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<td>Henderson</td>
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<td>Case study at University of Central Oklahoma. Described “Lean University”: a four-step process in projects relating to four functional areas of the university.</td>
</tr>
<tr>
<td>Paris</td>
<td>2007</td>
<td>Research-based report</td>
<td>Studied how 30 different institutions set up quality improvement departments and governed Lean projects.</td>
</tr>
<tr>
<td>Radnor &amp; Bucci</td>
<td>2011</td>
<td>Research-based report</td>
<td>Case study of four UK university business schools implementing Lean.</td>
</tr>
<tr>
<td>Roberts &amp; Tennant</td>
<td>2003</td>
<td>Research article</td>
<td>Described application of Lean planning tool, (Hoshin Kanri) at Warwick University Business School.</td>
</tr>
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</table>
Individual

• Course level or the level of teacher or administrator.
Table 3. Lean in Higher Education: Individual or Course Level Publications

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<th>Author(s)</th>
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<th>Format</th>
<th>Nature of Publication</th>
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<tbody>
<tr>
<td>Emiliani</td>
<td>1998</td>
<td>Research article</td>
<td>Argued wasteful human behaviour in the workplace should be viewed at the same hazard level as inefficient processes.</td>
</tr>
<tr>
<td>Emiliani</td>
<td>2004</td>
<td>Research article</td>
<td>Described use of Lean methodology to improve a university course.</td>
</tr>
<tr>
<td>Emiliani</td>
<td>2005</td>
<td>Research article</td>
<td>Described use of Kaizen to improve a university business course.</td>
</tr>
<tr>
<td>Emiliani</td>
<td>2008</td>
<td>Research article</td>
<td>Argued that wasteful executive behaviour needs to be curbed; organizations should consider standardizing executive work.</td>
</tr>
</tbody>
</table>
Conceptual Frameworks

• Ravitch and Riggan (2012) defined conceptual frameworks broadly as, “an argument about why the topic one wishes to study matters, and why the means proposed to study it are appropriate and rigorous”
Why Ask Lean HE People?

• Can use academic research to get at experiences of those closest to the action re: improvement projects.
• Reflections on learning at individual, group and organizational levels.
Participants and Projects

- Staff in Western Canadian university sector, typically long service.
- Project areas included 5S and VSM projects in bookstores, equipment stores, admission processes and medical education stores.
Expert Groups (ACTIVITY)

• Discuss for 5-10 minutes how you view learning in the context of the improvement projects you have been involved with at your institution.

• Jointly note experiences and consider possible themes of experience.
Study Respondents and You

• Giving voice to participants.
• Brief examples of what participants said to follow
Susan (Admissions)

Faculty, I feel sorry for sometimes, because they are trying to figure things out with the information available or the rumour mill ... it is a lack of clarity, which is partly the nature of where we work.
Jill (Chemistry Stores)

There’s really been precious little discussion about it from the top down about what the value of this is. There has been really no discussion about this institutionally, and maybe it’s because people wouldn’t pay attention to it anyway, but then you can’t evaluate things when you are not exposed to them.
Paul (Health Sciences)

We had to look at each individual’s learning patterns and how they learn, because I’ve got people there who do it very intuitively and just grasp Lean right away. But we also have some people who need time to process this ... to watch somebody do it first... to think about it.
Grace (Bookstores)

Because you get the participatory thing, which is real, not lip service, and people feel involved. There’s more than one way to approach projects ... you don’t have to follow all of the particular pieces ... some will work better than others. You get immediacy of results; you don’t have to wait 2 years to get results.
Participant Themes

1. Effective communication promoted learning and enhanced efficiency.
2. Conceptions of organizational learning focused predominantly on the unit or department.
3. Efficiency methodology was superordinate to efficiency method.
4. Learning was conceptualized as an essential project resource.
Study Conclusions

1. Efficiency initiatives served as an impetus for organizational learning.
2. Communication emerged as the most important factor to ease system limitations.
Implications/Questions

• How do we communicate about improvement and from which organizational level does it come from?
• What is the parlance of improvement at our institution?
• Do we talk about Lean through lens of cost-cutting or quality?
Implications/Questions

• Do we want to promote organizational learning through a clear coupling with improvement efforts?
• Do students know what we are up to? Do they even care?
Future Study

• Literature review on Lean in HE focused on research publications - and find ways to maintain currency.
• Case studies and methodological papers on what learning looks like relating to improvement.
Discussion and Thank You

• david.francis@usask.ca
• Search dissertation as “A Study of Organizational Learning in a University Efficiency Initiative” (2015)