Games and Activities for Teaching Lean Concepts

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Marc Carlton

- BS, Mathematics and Computer Science
- MBA
- Lead Business Process Improvement Shared Service at University of Illinois
- Previous experience includes software development & consulting for variety of industries
- Hunting, fishing, kayaking, biking
Amy Glenn

- BS, Business Administration
- Ed.M., Human Resources Education
- Lean Six Sigma Black Belt Certification, in progress
- Process Improvement Facilitator and Trainer
- Online Health and Fitness Coach
- Runner
- Boy Mom
University of Illinois

- Three campus system
- 23,500 employees
- 78,000 students
- About 700,000 living alumni
- $5.6B budget
- 35th in Best Global Universities
- 10,000 international students from more than 110 nations - 1st among American public
Ruth Archer

• BSEE, MBA
• Manager of Process Improvement at Michigan Tech
• Instructor at Finlandia University and Michigan Tech
• 22 years in the US Air Force as aircraft mechanic, radar engineer, instructor
• Small business owner—Superior Leadership Institute
• Cross country skiing, bike riding, camping
• 4 dogs, 2 cats
Michigan Technological University
We prepare students to create the future.

Our Vision
Michigan Tech will lead as a global technological University that inspires students, advances knowledge, and innovates to create a sustainable, just, and prosperous world.

- Leading public research university, established in 1885
- Enrollment > 7,000 students
- Located in the Upper Peninsula of Michigan
- More than 120 degree programs in arts, humanities, and social sciences; business and economics; computing; engineering; forestry and environmental science; natural and physical sciences; and technology.
- Education emphasizes research, cross-disciplinary study, and team learning.
Today’s Objectives

• Experience Lean learning on a practice field
• Recognize Lean principles illustrated by the games and activities
• Re-create activities for Lean training
Road Map

• How Experiential Learning Adds Value
• Boat Building
• Circle Standard Work
• Break
• Numbers Game
• Personal Kanban
• Wrap-Up, Reflection, and Report Out
How Experiential Learning Adds Value

"Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand."

Confucius, circa 450 BC
How Experiential Learning Adds Value

• Learning theory that operates on the premise that individuals learn best by experience -- "learning by doing"
• Learner is directly involved with the material being studied instead of just content
• Involves doing something and discovering what it is like, how it made the learner feel, what it meant to the learner
• Addresses the cognitive, emotional and the physical aspect of the learner
6 Main Characteristics of Adult Learners

- Self-directed/autonomous
- Utilizes knowledge & life experiences
- Goal-oriented
- Relevancy-oriented
- Highlights practicality
- Encourages collaboration
Learning Activities

- Concepts demonstrated:
  - Continuous Flow
  - Setup Reduction
  - Level Loading
  - Visual Controls
  - Pull
  - 5S
  - Standard Work
  - Kanban
Reflection

- Key take-aways or Aha! moments
- How you might use what you’ve learned today