Small and Medium Enterprise (SME) can benefit from students final project and enhancing student learning experience in Lean manufacturing

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BACKGROUND

• Industry Engagement Model
• It is an agile approach to engagement for ensuring the partnership between academia and industry.
• Partnerships between academia and industry continue to be based upon the creation, refinement, and assessment of the inputs, processes, and outputs to create benchmarks for success (O’Sullivan and Stewart, 2010).
• Agility also helps academia stay within the range of industry accomplishments as well.

• Course Objectives
• Enduring Understandings: The instructional goals for this course are presented as enduring understandings of the ‘big ideas’ that are essential to the field of lean manufacturing:
• Students will understand basic lean principles of waste, continuous improvement, and modern manufacturing system.
• Students will be able to complete a basic continuous improvement project utilizing lean thinking ideas and tools.
• Students will understand principles to lead or support an organizational effort to implement lean enterprise strategies.

MATERIALS AND METHODS

Various Ways of Industry Engagement

- Plant tour
- Case study
- Virtual
- Guest speaker
- Project
- Physical
- Professional organization

INDUSTRIAL ENGAGEMENT ACTIVITIES

- Introduction to lean tools and techniques that reduce costs and improve business performance: JIT, VSM, SMED, Kaizen, Standard Work, Cycle Time Reduction, Takt Time, A3, etc.
- As an introductory offering, students are exposed to Lean concepts applied to the manufacturing and other sectors.
- The course and Laboratory activities are designed for students exploration and application.
- Activities include: industry tours, industry guest lectures, case studies, student project, and conventional assessments.
- Emphasis on lean thinking and competency development through application: simulations, case studies, industry guests and mentors, teamwork and industry-related lean projects.

CONCLUSIONS

• SMEs are able to hire effective student to join the workforce.
• SMEs are able to get benefit of outside perspective when they bring students to do small project.
• SMEs are able to teach students skills required to join the future workforce.
• SMEs are able to provide management insight to student learning.
• SMEs promote collaborative learning and train students to work in group.
• Industrial project increases student industry interaction.
• Industrial project bridges the gap between industry and academics.

REFERENCES