

# Experiential Learning Through Simulation Labs

## Customer Profile

Started as a division of Jergens, Inc., ToolingU is a leading online-training provider focused on the unique needs of manufacturers located in Cleveland, Ohio.

With hundreds of online training classes written for metal manufacturers, welders, assemblers, and maintenance professionals, it has developed an extensive catalogue of manufacturing-specific content and innovative learning tools to help manufacturers bolster their expertise and leverage their people to successfully compete in today's economy.

## Business Needs

Delivering an effective training in itself is a daunting task and it gets all the more complicated for products with high technicality. In order to make its technical training more sound and to aid reinforcement of knowledge, ToolingU wanted to develop a system that would provide a learning experience that was not just informative but experiential.

They required simulation labs focused on electrical systems, hydraulics, pneumatics, motor control, mechanical systems, soldering, etc. The objective of these labs would be to provide some interactive exercises to the students after they have completed the course so as to allow them to apply their newly acquired knowledge to solve problems.



The image displays a simulation lab interface for "Fire Safety and Prevention" by Tooling University. The main scene is a 3D-rendered factory floor with a fire in a "Product Room". A worker is standing near the fire with a question mark above their head, indicating a problem. Two inset windows show interactive training modules. The left inset asks "What is the correct procedure for using a portable fire extinguisher?" and shows a sequence of four steps: 1. Pull Pin, 2. Aim at base of fire, 3. Squeeze handle, 4. Sweep side to side. The right inset asks "Which portable fire extinguisher should Mark use to extinguish the fire?" and shows three options: Air pressure water extinguisher, Dry chemical extinguisher, and Multi-purpose extinguisher. The interface includes a "continue" button and an "Exit" button.

## CASE STUDY

As each lab was to be fitted in a time space of 5 minutes, the main challenge was to identify and select important and relevant content and fit it in a storyline related to day-to-day working. Besides this, the amount of raw content available as vast, most of which was extremely technical nature.

### The Solution

For years, simulations have been used as a training tool for people in high-risk and high-skill occupations. Simulations help bring the learner closer to situations that exist in real life by recreating complex environments that mirror actual conditions or systems. Using this as a base, Upside Learning adopted a guided discovery approach to design a series of interactive labs wrapped into mechanical and engineering related scenarios to supplement the static content. This allowed the learners to be presented with real-life situations and demanded them to take suitable decisions to achieve specific objectives or resolve given problems.

Appropriate practice questions were interspersed throughout the labs to reinforce learning.

The above approach made the course very engaging and at the same time helped the learner to relate to it with day-to-day working conditions they face.

### Highlights

- Dramatic feedback to grab learner's attention
- Appropriate practice questions throughout the labs