



Machining

Help Your Manufacturing Training Program: Calculate ROI

Don Sears | Aug 14, 2018

Need a strategy to help justify or defend your machining and manufacturing training budget? A recent Tooling U-SME webinar shows you how return on investment metrics are the most strategic business method for employee learning programs.

Training is often the first thing to end up on the cutting-room floor when executives need to slash funds from a budget. But it doesn't have to be that way. The key is to know how to legitimately prove the return on investment, or "ROI," that training can garner, according to John Hindman, a director of learning and performance improvement, at Tooling U-SME.

Is it complicated? It's not exactly, but it does take the proper amount of time to discover and report on the results. It also takes stakeholder buy-in and support. Hindman explained all of this in great detail in a recent Better MRO webinar "*Learning the ROI of Learning*."

"Even in a time where the skills gap and retirements are affecting productivity and growth, training can still be the first casualty of cutbacks," says Hindman. "For this reason, champions of the company's learning and development programs must show value of their programs to leadership and how the company can't grow without them."

Unfortunately, most training managers do not know how to show a "monetary return to stakeholders," explains Hindman.

How Do I Show Return on Investment on Manufacturing Training Program?

In simple terms, ROI is the difference between your costs and the benefits or outcomes of those costs, says Hindman. ROI is about charting and showing improvement—and understanding what it costs to realize improvement. When a manufacturer needs to boost production on the shop floor, it might look to evaluate its tooling, machining, part accuracy and whole host of productivity metrics—that are then related to costs including understanding areas such as shop rate, parts produced per hour and labor costs.

"[ROI] is the outcome of what we paid and what we gained from that investment," says Hindman. "The same idea applies when a manufacturer purchases a new piece of equipment that produces twice the amount of parts the old machine produced: At some point the return on investment is realized by

higher part production. The same principle can be applied to developing a high-performing workforce.”

KPIs for Manufacturing

So which key performance indicators will you choose to show your stakeholder executive team that you want to gain or continue funding for your training programs? In machining and manufacturing environments, there are quite a few to choose.

“To produce the data executives would need to clearly see the value of your training and development program, you must proactively decide what you are going to measure,” says John Hindman, a director of learning and performance improvement, at Tooling U-SME. “This needs to be identified before the program is launched so you can baseline current state versus the improved state after the program has been completed.”

In his presentation webinar “Learning the ROI of Learning,” Hindman lays out KPIs tied directly to people development and retention, including: **safety, scrap, productivity, machine downtime, time to competency and cost of hire** (attrition).

“Improvements in each one of these areas will bring monetary returns back to the business, so you need to make sure you align these or other metrics with your training program,” says Hindman.

The State of Training: Evolving from the Kirkpatrick Evaluation Model

Hindman spent a few minutes explaining how training methodologies have evolved. Experts in educational employee development built upon the oft-used **Kirkpatrick Evaluation Model** for training, which has four levels: Reaction, Learning, Behavior and Results. The main limitation with this model is that it doesn’t include enough information on the business value.

“For training to stay off the cutting-room floor, executives need more,” says Hindman.

Luckily, **Dr. Jack J. Phillips**, chairman of the **ROI Institute**, came along and expanded on the Kirkpatrick model, taking it to new levels. Phillips effectively created a fifth level about ROI.

“Level 5 looks at data and the true cost value that a learning and development program can return to the business,” says Hindman. “Based on calculations and a data collection process, a training champion can show how the dollars spent on training has saved money or brought new revenue into the business.”

Hindman detailed the process for using ROI methods, which has four key phases: evaluation planning, data collection, data analysis and reporting.

“When doing your planning, it is important to set expectations with your leadership,” says Hindman. “Most training and development programs do not show returns immediately, so set realistic expectations on when you will be reporting what we hope is a positive return on the business.”

How do you get the best results for ROI? Over time.

"It is also typical that evaluations are conducted months or even a year after training has been completed, so be sure to develop an evaluation project plan that displays the proper timeline," explains Hindman.

Calculating the ROI Formula for Manufacturing Training Programs

It sounds simple, but it does take some work to fully understand your costs. It also requires enough data collection—over time—to understand how learning and development has impacted employees and business results. But at its core, there are some simple calculations to understand: ROI equals net project benefits—which are the benefits of the program minus the project costs divided by the project costs: **ROI = NPB (Benefits – Cost) / Project Costs**.

"As an example, let's say the cost of the training program was \$230,000, but the benefits of the program returned \$430,000 in the first year ... Maybe there was a reduction in scrap or reduced machine downtime that was contributed to the program," says Hindman. "If we calculate this out, the program showed an 87 percent return in the first year. Any executive would see value in the training program if you can show this type of return data."

Here's that formula in action with the example figures:

$$\$430K - \$230K / \$230K = .087 (x 100) = 87 \text{ percent}$$

"The formula is the easy part. The difficult part is figuring out your project benefits and costs," says Hindman. Continue here for the full *white paper* on 'Proving the ROI of Training'.

Need help calculating aspects of your machining program? Want to measure your machining productivity? Use our Machining Calculator and Productivity Calculator.

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Director of Learning and Performance Improvement, Tooling U-SME

Benefits of Using ROI Methodology in Manufacturing

Beyond justifying or defending training budgets, there are a host of benefits Hindman outlined. Among them, earning the respect of executives and company leadership was a key one. Another key benefit is understanding which training programs may not be as effective as they should be—so using ROI can help a program figure out what to eliminate. Also, ROI can help companies understand what training programs can be grown.

Are you using ROI to justify and fund your training programs? Share your stories.