



Lean Knowledge Transfer

A Maverick Institute White Paper

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In Brief

Tough economic times mean tighter budgets and fewer people, alongside the need for more compelling products and services, expert employees, and mistake-free performance.

In this environment, knowledge transfer -- how we train and develop employees and how we share what we know with employees, customers, vendors and partners -- is more critical than ever.

How can we train, develop and share knowledge with measurably better results, but with far fewer resources?

Lean Knowledge Transfer improves the efficiency and effectiveness of training and knowledge transfer.

One answer is ***Lean Knowledge Transfer***, a process that improves the efficiency and effectiveness of training and knowledge transfer by applying the same concepts and methods that have transformed manufacturing.

Lean methods eliminate waste and leave only what adds value. When we examine today's training and development process through this exacting lens, we see tons of waste. Eliminating it frees up resources and allows us to implement training methods that achieve specific business objectives quickly and reliably.

Lean methods eliminate waste and drive training toward improving specific business metrics.

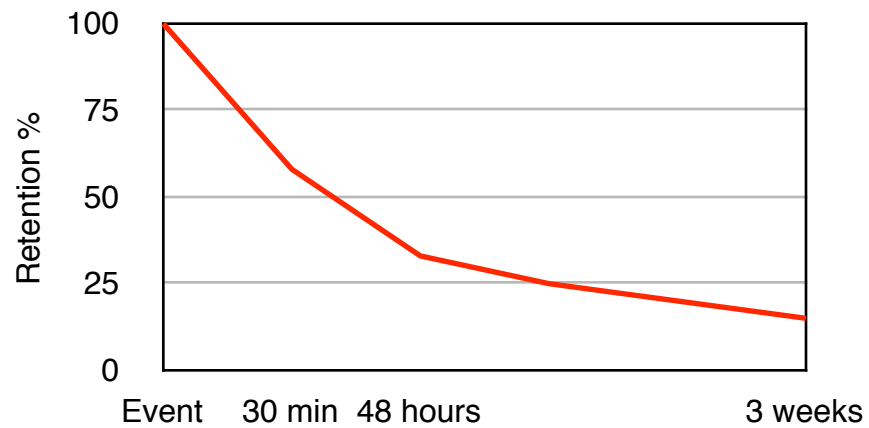
The Problems With Formal Training

Most formal corporate training today wastes money and time. It's only weakly linked to business goals, rarely tied to business metrics and delivers poor or unknown results.

Dr. Stanley Malcolm, a professional corporate educator of more than 25 years, estimates that less than one penny of every budget dollar of corporate training actually generates improved business performance. <source: 'Less Than a Penny for Learning' article at Performance Vision, LLC, Web site, 2002>

Most companies still rely heavily on classroom training for knowledge transfer and skills building. But classroom training is expensive, both in hard and soft costs. Hard costs include pay for trainers and staff, classrooms and equipment, licensing content and travel. Soft costs include time scheduling trainers and students, employee time away from the job and the losses that occur while the employee is waiting for the training they need.

Worse, classroom training has very little impact on business performance. Study after study has shown that typical classroom retention is very poor, as low as 15% after only three weeks.



Source: Research Institute of America

More and more companies are turning to e-learning as a solution, and while this offers advantages in self-scheduling and individual learning pace, many current e-learning offerings are prohibitively expensive to create, license, install, and maintain.

Another problem with e-learning is accessing content due to large video and audio files overwhelming available bandwidth. And too much e-learning is largely 'classroom instruction on a computer' with equally low retention rates and not enough measurable business impact.

So, while e-learning technology offers great promise and continues to improve, it is not a panacea for the problems inherent in formal training and development.

Also, learning management systems (LMS) are increasingly popular, but unless the training itself is retooled to be much more effective, the LMS will just be an additional and significant expense to try to manage an inefficient training process.

Think of it this way: A system that makes it easier to schedule classroom training, where students will forget 85% of what was taught after only three weeks, can hardly be called an improvement. The technology is working on the wrong end of the problem.

Training is caught in a conundrum. After decades of delivering too little to the bottom line, the T&D function has trained executives to have low expectations. So executives are rightly reluctant to spend much time and energy on training. Cost per student, not improving results, is the focus.

What's needed is a new approach to training that focuses, first and foremost, on creating a positive business impact.

Lean: A Methodology to Cut Training Waste and Add Value

Pioneered at Toyota and spread throughout the business world, Lean has transformed manufacturing, dramatically improving quality and reducing costs.

Today, Lean is being successfully applied outside manufacturing, from services to software development to health care. But as of today, few companies are thinking about applying these powerful methods to training and development.

Lean methods systematically eliminate waste and focus only on what adds value. In a nutshell:

If there's a way to do without it, then it's waste.

Following this edict, here's a short list of waste that we see in formal training.

- Classrooms, chairs, tables, desks, projectors
- Food, drink and breaks
- Travel
- Post-training surveys and reports

Can someone learn without these things? Absolutely. They don't directly add value. They're waste.

Another way to identify waste is to ask "If I added more of X would learning be significantly improved?" More projectors? No. More food? No. More travel? Definitely not.

Here are examples of value (i.e, what we can't do without) when it comes to training:

- Expert knowledge
- Time to ask questions
- Practice opportunities
- Feedback

This is the value that training systems should provide in abundance.

After decades of delivering too little to the bottom line, training has 'trained' executives to have low expectations.

What's needed is a new approach that focuses on creating a positive impact.

Applying Lean to Knowledge Transfer

All this waste is present because formal training is, couched in operations terms, a 'mass production' model. Formal training tries, unsuccessfully, to create an 'inventory' of knowledgeable, skilled employees that can perform tasks sometime in the future. Reducing 'cost per head' drives the process.

Here's a typical example:

Four employees of Company XYZ need to learn how to do linear regression to accomplish a new requirement of their jobs. The training department says: "It's not worth it to run a class on linear regression for just four people. Let's run a class on basic statistics. It will take time to get it going, so let's run the class next quarter."

What starts out as four people needing to learn how to do one thing today becomes 20 people sitting in a classroom for eight hours learning to do ten things 12 weeks later. The original learners' needs got lost in the production-delivery process.

Lean can improve the efficiency and effectiveness of traditional training approaches by applying the same concepts that transformed manufacturing. These concepts combined with others provide a clear framework for evaluating, selecting and implementing training techniques and technologies.

For example, applying five of the Toyota Production System's 'Seven Wastes' to training yields the following.

Waste	Manufacturing	Training
Overproduction	<ul style="list-style-type: none"> Producing too much, i.e., more than customers want Producing in larger batches than necessary 	<ul style="list-style-type: none"> Teaching more than needed to solve current problem Teaching more than learner can handle at one time
Waiting	<ul style="list-style-type: none"> Process queue time Machine downtime Set up time 	<ul style="list-style-type: none"> Waiting for classes or information Time to create content
Inventory	<ul style="list-style-type: none"> Raw materials WIP Finished goods 	<ul style="list-style-type: none"> Unused knowledge Course materials and documents waiting to be used
Transportation	<ul style="list-style-type: none"> Moving inventory, work in progress and finished goods 	<ul style="list-style-type: none"> Moving people and materials for instruction
Defects	<ul style="list-style-type: none"> Scrap and rework Field failures 	<ul style="list-style-type: none"> Failing to retain knowledge OJT mistakes

These five wastes were all present in the linear regression example.

1. **Overproduction** -- Only four people needed training, but 16 additional people were trained as well. Only one task actually needed to be learned, but ten were taught.
2. **Waiting** -- The four needed training today, but waited 12 weeks while the additional 16 people and an instructor were scheduled.
3. **Inventory** -- Eight hours of course content was created ahead of time. It's quite likely that 20% of that was obsolete or not applicable at all.
4. **Transportation** -- Twenty students plus an instructor traveled to a central classroom to learn the material. Course materials were shipped in advance at company expense.
5. **Defects** -- Students forgot 85% of what was taught. In addition, the four people who needed the knowledge made mistakes in the 12 weeks they waited for the course.

Maverick Lean Knowledge Transfer Principles

The goal of Lean knowledge transfer is to improve measurable business performance by delivering exactly what people need to know, and how they like to learn it, exactly when they need it.

For knowledge transfer to be considered Lean, we believe the following principles must be present:

1. **Clear Learning Signal** -- People need to know when they need to learn before attempting an activity. People understand the limits of their knowledge and skills.
2. **Pull, Not Push** -- Individuals 'pull' the knowledge they need to accomplish a specific task. Training events that 'push' information in advance of need are minimized.
3. **Just-in-Time** -- They can pull the knowledge exactly *when* they need it to accomplish a specific task. Opportunities to practice and master content are immediate.
4. **Instant Gratification** -- The time required to find content is instantaneous. Learning is directly tied to application. Feedback on results is immediate.
5. **Individualized Learning** -- The format, amount and rate of learning are all tailored to the individual's learning style, previous experience and the specific situation they're facing.
6. **Freshness** -- Content is created as close to the time of need as possible, so it's up-to-date and focused on the problem at hand.

Our four linear regression learners above, when they needed help, would have been able to find content and teachers to learn what they needed to know right away. If they wanted to read a procedure, listen to a podcast or see a video, these would all be available close at hand and the training content would be up to date.

If they preferred to learn from someone else, a 'mentor' would show them how to make pivot tables. The learners would have been able to apply the learning right away to get practice and feedback.

In all cases, safe practice environments like a 'sandbox' or a simulator would be available. They would master the material at their own pace before learning more.

Why Should You Implement Lean Knowledge Transfer?

✓ **Fast, Measurable Results**

- Training is applied to advance specific quantifiable business objectives. The connection between training and impact is clear.
- Only those who need training get it. The focus is on helping them master and apply the content to improve performance.
- Content is delivered with a minimum of delay. Problems get solved faster.

✓ **Lower Costs**

- Business objectives get met more fully and more quickly, resulting in higher cost savings or increased revenues.
- Classroom time is minimized, reducing travel expenses and time away from the job.
- The need for resources like classrooms and specialized trainers is reduced.
- Training time is reduced by taking into account current levels of expertise.
- Expensive learning technologies are avoided altogether or deferred until they are needed.

✓ **Sustainability and Morale**

- Training becomes more effective and cost-efficient, and is affordable even through down business cycles.
- Training doesn't yo-yo between feast and famine. Employees can improve their skills even during down business cycles.
- Training and development professionals have a framework and language that closely aligns them with the operational business units they serve, many of whom have implemented Lean.

About the Maverick Institute

The Maverick Institute works with organizations to 'retool' inefficient classroom-focused training with new and more effective knowledge transfer methods and technologies such as:

- Lean Knowledge Transfer
- Mentoring
- Viral Teaching
- On-Line Learning
- Simulation
- Social Networks

Through our Lean CLO™ services, we help companies learn how to "lean out" their training and development. We also offer companies the opportunity to do Lean T&D by outsourcing all or part of their training and development through us.

Maverick clients range from fast-and-furious start-ups to mid-size growth companies to the Fortune 100 and are located around the globe.

Head Maverick Todd Hudson is available for quotes, stories, keynote speaking and Maverick lunch briefs.

More information at www.maverickinstitute.com or at Todd Hudson's blog, The RoundUp, at www.mavroundup.blogspot.com.

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