

TECHNICAL TRAINING

MYTH BUSTERS

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Objectives:
Define Technical Training

Myth Busting Technical Training

- **Objective:** Improve the effectiveness of technical e-learning content with instructional design techniques specific to technical content.

Myth Busting SME Jargon

- **Objective:** Translate the technical SME jargon into useable e-learning content.

If you have any training myths that you would like examined more closely, please see the 2nd to last page of this handout.

Definitions of Technical Training taken from a survey of training professionals:

- Training that involves intricacies of a detailed mechanism.
- Technical training involves teaching something concrete vs. theoretical.
- Technical training is training that deals with a subject that relates to an applied science or requires the demonstration of a proper technique.
- The training that is specifically designed to transfer knowledge on a subject that is related to the repair and maintenance of something.
- Technical training is a process of learning different skills targeted to improve upon your ability to support a product.
- Technical training is the teaching of knowledge and/or skills to individuals to better do the hands-on portion of their job.
- Any training that deals with any sort of theory, whether that be mechanical, electrical or the development of software.
- The detailed training of how to use a product. Not a broad understanding of how it works but a step by step understanding of a process.
- Technical training is a combination of knowledge instruction and practical performance on any variety of a multitude of engineering sciences.
- Any training that deals with how to do something.

Definition of Technical Training for our discussion

- Content related to engineering sciences
- Applicable to a persons job function
 - Product support
 - Product knowledge
- Range of complexities
 - Operation – step by step
 - Repair – step by step with some synthesis
 - Troubleshooting – synthesis and evaluation

Common Technical Training Myths

Myth 1

Machine time is essential to the successful outcome of technical training.

Myth 2

Training must create a skill – not just knowledge.

Myth 3

Knowledge and performance can be separated – with the knowledge placed into WBT pre-work.

Myth 4

Students do not need to memorize content, only where the procedures are located.

Myth 5

Software is an easy win for e-learning content.

Myth 6

Technical Training deals only with absolutes.

Myth 7

Because it is related to the equipment, technical e-learning is only effective with detailed graphics – in fact, 3D models would be best.

Myth 8

Everyone entering technical training has a baseline knowledge.

Myth 9

Technical content should be administered independent of other training the company offers.

Myth 10

Animating a procedure is an easy win in technical training.

Myth 1**Machine time is essential to the successful outcome of technical training.****Myth Origin**

People complain about every minute of classroom and administrative time in training indicating that it is a waste of time.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

Specifically target content for e-learning that will enable the students to begin the hands-on training as soon as they arrive at ILT.

Myth 2

Training must create a skill – not just knowledge.

Myth Origin

In order to reduce training time, management requests that content that supports employees understanding of equipment request that content be removed.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

Reduce the cost of delivering background knowledge content by transferring it to elearning.

Myth 3

Knowledge and performance can be separated – with the knowledge placed into WBT pre-work.

Myth Origin

In order to increase tool time at the training center, management requests a project to place all of the knowledge components of training into WBTs which will be pre-requisites for the training.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

- Pushing knowledge objectives to e-learning can be effective but a thorough job must be done analyzing how the knowledge is linked to the performance and the ability of the students to retain the knowledge without the corresponding performance.
- Look at the entire training program for e-learning opportunities not just a single section/topic/module.

Myth 4

Students do not need to memorize content, only where the procedures are located.

Myth Origin

Certain groups of people will proudly proclaim that all skills and knowledge are reference-able and therefore students should not be encouraged to memorize content.

- Variation of the myth: all quizzes and tests should be open-book

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

Carefully identify whether or not content is to be memorized. Memorized content lends itself to e-learning games. Non-memorized content should emphasize the use of the procedure and the location of the procedure.

Myth 5**Software is an easy win for e-learning content.****Myth Origin**

What better way to teach software than through the software medium!

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

- Software functions in e-learning should be as realistic as possible.
- Create a robust learning environment which simulates the same mindset, stresses, and simulated risks as students will experience in real-life
- Carefully evaluate if a machine function is associated with a software function. If the machine function is essential to the software function then the machine function must be included.

Myth 6**Technical Training deals only with absolutes.****Myth Origin**

If there is no procedure then it should not be in technical training.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

- Branching scenarios allow students to explore the multiple options available to solve problems.
- Fun activities, like games, reinforce the absolutes.

Myth 7

Because it is related to the equipment, technical e-learning is only effective with detailed graphics – in fact, 3D models would be best.

Myth Origin

Media Production and SME want to see the details of the equipment and therefore drive for high resolution.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

Focus on the objective! – If the objective demands a detailed graphic to make the student successful then invest in the detail, otherwise scale back as necessary.

Myth 8

Everyone entering technical training has a common or baseline knowledge and skill set.

Myth Origin

Hiring guidelines are touted as excellent, therefore fundamental skill training is not required.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

Fundamental skill training may not be required for everyone therefore an online assessment and training program for these skills can be practical.

Myth 9

Technical content should be administered independent of other training the company offers.

Myth Origin

Technical training should focus completely on the equipment procedures and not the soft skills stuff of HR.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

- Pursue a holistic program approach by establishing clear linkages between all ILT and WBT. Classes and e-learning should mutually support each other.
- Build e-learning that resembles the real world expectations and environment of the employee.
 - If tense customer interactions are a part of their job then simulate the tension.
 - If entering information into a database is required then complete the simulation with entering the data.
 - If using a specific methodology is part of their job then simulate using the methodology.

Myth 10**Animating a procedure is an easy win in technical training.****Myth Origin**

We have a good procedure so videotape or take still photos of it being performed and put it on the Internet.

I have seen this in my organization: Yes / No

Discussion Notes:

Myth Status: Confirmed – Busted – Plausible

E-learning Strategies:

Just-in-time training in stead of just-in-case training is a good idea provided the design is sound, meets the needs of the end user, and is accessible when needed.

SME Jargon

Common SME beliefs (misconceptions) related to the instructional design process and content creation:

- SMEs believe that acronyms and terminology is easily picked up and therefore does not need special attention in course content.
- Seasoned SMEs believe the detailed sciences behind what they do are critical therefore the scientific or technical content must be included in the course material (regardless whether or not it relates to the objective).
- Hiring practices require Instructional Designers to be an SME because of the technical nature of the course content.

Discussion Notes on SME Jargon:

If you have any training Myths that you would like examined more closely, please use this page to let me know or send them to me at ndenardo@yahoo.com.

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Design considerations that impact technical e-learning

Analysis

- Look at the entire training program for e-learning opportunities not just a single section/topic/module.
- Carefully identify whether or not content is to be memorized. Memorized content lends itself to e-learning games. Non-memorized content should emphasize the use of the procedure and the location of the procedure.
- Carefully evaluate if a machine function is associated with a software function. If the machine function is essential to the software function then the machine function must be included.
- Fundamental skill training may not be required for everyone therefore an online assessment and training program for these skills can be practical.

Design

- Pursue a holistic program approach by establishing clear linkages between all ILT and WBT. Classes and e-learning should mutually support each other.
- Specifically target content for e-learning that will enable the students to begin the hands-on training as soon as they arrive at ILT.
- Pushing knowledge objectives to e-learning can be effective but a thorough job must be done analyzing how the knowledge is linked to the performance and the ability of the students to retain the knowledge without the corresponding performance.
- Branching scenarios allow students to explore the multiple options available to solve problems.
- Fun activities, like games, reinforce the absolutes.
- Build e-learning that resembles the real world expectations and environment of the employee.
- Just-in-time training in stead of just-in-case training is a good idea provided the design is sound, meets the needs of the end user, and is accessible when needed.

Development

- Reduce the cost of delivering background knowledge content by transferring it to e-learning.
- Software functions in e-learning should be as realistic as possible.
- Create a robust learning environment, which simulates the same mindset, stresses, and simulated risks that students will experience in real-life.
- Focus on the objective! – If the objective demands a detailed graphic to make the student successful then invest in the detail, otherwise scale back as necessary.