

## Separating core learning content from 'just in time' material

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One of the biggest mistakes made in delivering eLearning courses is to burden staff with needlessly remembering unnecessary information.

Clinging to the traditional view of 'training' being the transfer of *knowledge* from expert to novice, there is still a misguided drive to fill employees' heads with facts and figures and to demonstrate recall with a quiz. This isn't *training* staff, it's dipping their brains in information and hoping some of it will stick, regardless of whether the individual can actually *apply* what they've learned.

There has to be a better way of leading staff towards competence.

I think there are several reasons why this practice persists. Existing training materials (PowerPoint slides, videos, PDF documents, etc.) are often used as the starting point for developing new eLearning courses. This material has usually been produced by a subject matter expert who, understandably, will have included everything they've learned over the years. Consequently, creating eLearning content based on these slides is seen as cheaper and faster than starting from scratch. Another reason is that all regulated companies are obliged to lead staff through specific material in order to prove compliance and this is unavoidable.

The flaw in this approach is that it bears no relation to what the company needs employees to be able to do, both initially and when faced with completing tasks months in the future. So, I believe the answer is to ignore all your existing training materials and first define the *business* objectives for the employee's role.

For a service engineer this might be to 'maintain the company's pumping equipment within contracted reliability levels.'

In order to meet this, an eLearning course would be required whose *learning* objectives might include being able to:

- Take measurements of flow rates on model 5100 pumps
- Determine when filters need to be cleaned/replaced
- Clean/replace filters
- Diagnose the 10 most common faults and identify likely causes

Note that none of these learning objectives demands that the engineer simply recalls *information*. They go much further: they equip the engineer with the understanding of how to effectively carry out a task. I wouldn't go as far as to claim that eLearning can measure *competence*, since that's a measure of their performance which will also need field experience and on-the-job supervisor assessment.

Designing 'task-based' learning objectives also means using assessment techniques which go beyond simple multi-choice quiz questions. These might include interactive control panels to show flow rates and error conditions, flow test meters with adjustable ranges, access to equipment fault

logs, and so on. The most engaging approach is to face learners with realistic scenarios in which they must take actions. Help should be provided as 'hints and tips' during the assessment, although the assessment should penalize them for each request they make.

An engineer passing this assessment will have demonstrated an *understanding* of the tasks he will face, not simply a knowledge of them and your eLearning course can concentrate on preparing him to achieve this. He will obviously need to commit *some* information to memory but not a great deal and this is where the power of mobile technologies should be exploited.

Back to our field service engineer. It's six months since he completed the eLearning course and he's had a call from a client with a failing pump, a model 5105A. He's never seen a fault on one of these new products but it doesn't matter. On arrival, he notes the error conditions, logs in to his tech support site with his iPad and accesses symptom tables with causes, a diagnostic chart and a set of video procedures. Within minutes he has all he needs and is on his way to efficiently fixing the problem.

An even slicker solution might be to exploit one of the new, *enhanced reality* technologies such as Aurasma ([www.aurasma.com](http://www.aurasma.com)) to provide instant guidance. The engineer points his mobile device camera at the pump control, the application recognizes the equipment and launches an interactive fault-finding guide, complete with narrated video clips and the latest technical tips. Now *that's* working smarter!

In summary, the approach is:

- Don't build eLearning to mimic existing courses
- Define business objectives for the role
- Define measurable learning objectives based on *taskcompletion*, *not* knowledge recall
- Build eLearning content and assessments to achieve learning objectives
- Leave out non-essential reference data from the eLearning
- Build support facility to provide remote guidance on demand
- Include practice using remote support tools in the eLearning