



ENSURING ACQUISITION OF MISSION CRITICAL SKILLS: Simulations as Assessment Learning Solutions

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Your organization's future depends on the ability of managers, professionals and other employees to deliver when it counts, when performance is mission critical.

Mistakes when the task is mission critical get costly. They dissatisfy customers, cost time and money, reduce revenue, and add value – to the competition. In many instances, mission critical task failures cost a lot more than lost customers and revenue -- even the loss of human lives.

How can a chief learning officer (CLO), CEO, or COO, ensure that people assigned to mission critical tasks have the required level of proficiency to perform when it counts?

Further, how can the CLO, CEO, or COO assess the level of employees' proficiency in a timely, cost-effective, and reliable way?

What is the optimum balance of mission critical risk management, time, and cost?

Optimization Choices

That last question really is the critical issue: how to optimize.

There are many possible learning solutions, ranging from on-the-job training and mentoring, to internships, e-learning, classroom training, and simulations. All have their correct applications, depending upon the content and targeted level of proficiency.

Levels of Proficiency

Mission Critical Proficiency

By definition, mission critical performance refers to any situation when an individual or team of employees must perform a task or execute a process with severe consequence for failure to deliver.

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Therefore, mission critical proficiency is (virtually always) either at the fluency or the mastery level. The more risk involved in an individual's ability to perform, the closer the required proficiency gets to mastery level.

Simulations as Mission Critical Proficiency Assessments

Simulating mission critical tasks to establish that learners have achieved the essential proficiency level has???

Simulations as Assessments of Proficiency

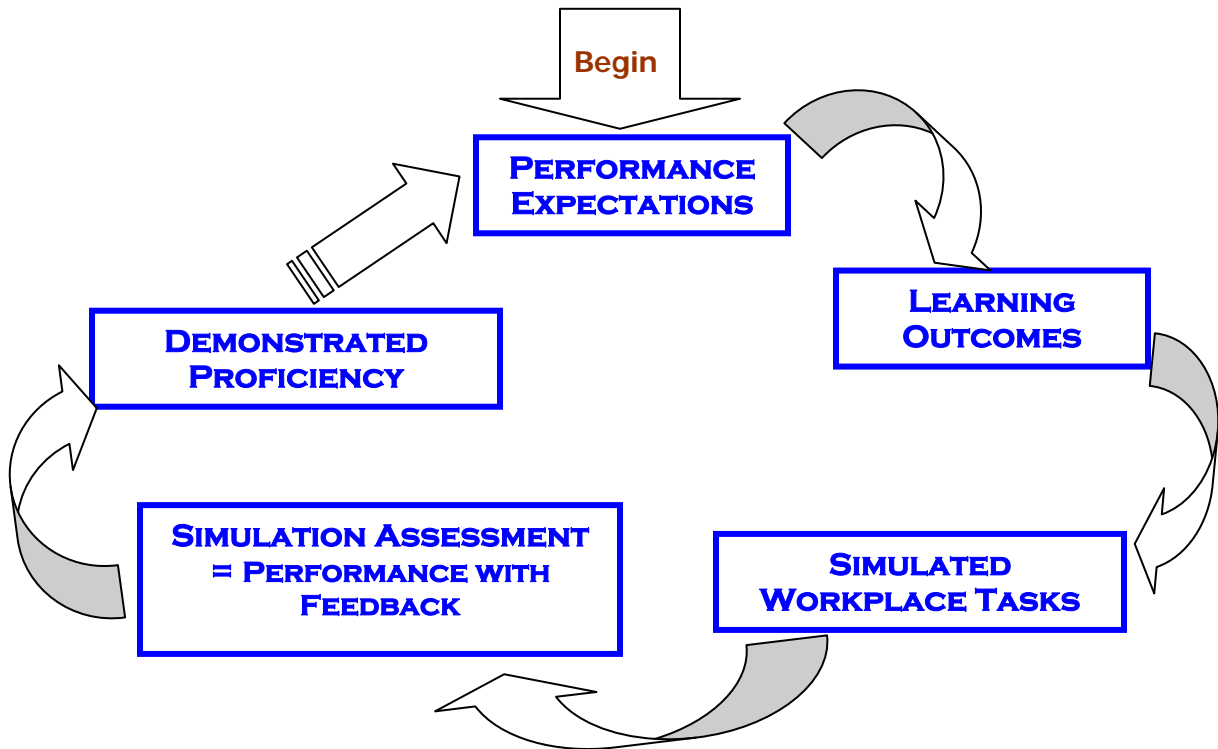
Experiential learning from mistakes on the job can be both dangerous and costly. Armed forces and many professions learned this fact the hard way, as have many corporations and institutions.

When proficiency on the job ties the closest to increased revenue, reduced cost, improved customer satisfaction or shorter cycle times, simulations have proven their value time and time again. The value simulations add lies both in the performance feedback they provide, and in their inimitable ability to assess proficiency under realistic workplace conditions.

The Effectiveness of Simulations as Assessments of Competency

As a general principle, a simulation of work-based tasks or workplace problem-solving is the ultimate assessment of ability or competency, if the following are true:

- The simulation assessment environment closely parallels the work environment;
- The simulated tasks to perform, problems to solve, or situations to manage replicate workplace tasks, problems and situations;
- That replication of workplace tasks, problems, and situations includes parallels in terms of complexity, urgency, and speed of performance, with feedback.



Familiar Examples of Effective Simulations as Assessments

Whenever we rely upon the competence of others, because our safety, health, even life and limb are at risk, we require extensive training, licensing, and demonstration of competency.

For instance, airline pilots must not only have pilot licenses, but also *current* ratings on the *specific* aircraft they fly. A pilot with decades of experience nonetheless completes a series of steps before his or her rating is current on a particular aircraft. The training begins in the classroom, but quickly moves to a flight simulator that replicates the cockpit of that aircraft down to the colors or the warning lights and the shapes of the controls. After many hours of simulated flight – during which the pilot must respond to a list of emergencies few pilots would experience once in a career – then the pilot flies with instructors in the real aircraft but without any passengers. Finally, the pilot flies as the co-pilot for a prescribed minimum number of hours before he or she gets a captain’s rating on that aircraft.



Surgeons in training practice on cadavers, lab specimens, and computer-based simulations, long before they first say “scalpel,” in an operating room. Their training lasts a minimum of seven years, up to twelve years, under constant, immediate supervision of more senior surgeons. Even after they have been in practice for decades, they must complete continuing education and attend hands-on training sessions before they use new techniques, surgical instruments, or updated methods.

Carpenters, plumbers, nurses, physical therapists, architects, engineers, actuaries, and a long list of other professionals and skilled trades people undergo similarly rigorous training, the end results of which are assessed with simulated work tasks, or real workplace tasks overseen and evaluated by more senior practitioners.

An Old Idea Moving at Warp Speed

Simulations, as a means of effectively training people and assessing their competency at the fluency or mastery level, have been around since ancient times. For instance, who knows how long ago a pre-historic tribal chief decided to train archers by holding archery competitions with targets and prizes?

Recent advances in technology have made it economically feasible to develop assessment simulations that do not cost millions, like a flight simulator, nor take years to complete, like surgical residency.

The Regis Learning Solutions SimPort™ simulation technology makes it technologically feasible and cost-effective to create assessment simulations. Moreover, these assessment simulations can not only provide individual participants quite specific feedback on their level of competence, but also provide data on the overall patterns of strengths and weakness in workplace groups.

How Does the RLS Simulation Assessment Methodology Work?

This list is a high-level overview of how RLS constructs a Simulation Assessment, and ensures that the assessment provides the essential evaluation of competence and feedback for further training.

RLS always begins with the targeted outcomes; what are management's expectations of on-the-job performance and proficiency?



1. Define learning outcomes (the competencies or learning objectives) that the simulation will assess.

This important first step accomplishes two purposes. First, it ensures that a simulation (vs. a knowledge test, in-basket exercise, or other assessment method) is the appropriate tool. Simulation assessments are not always the optimal balance of cost, effectiveness, and time. Simulation assessments work well with complex tasks that require applying a variety of skills and knowledge to perform those tasks quickly and accurately.

Second, this step targets what the simulation will assess, including the level of proficiency.

Usually, these competencies or learning objectives are outputs from a job study, or observations and other investigations of what workers or professionals actually do on the job, or of how they will use new tools or systems to perform on the job.

2. Design simulated work tasks that require demonstration of all of the targeted learning outcomes.

These simulation tasks are realistic, replicating the work environment, tools, inputs, barriers, outputs, and time constraints as closely to the workplace as feasible.

At this point, simulations add greater value as assessments. They prove that the learner can perform under the pressures and in the situations that the workplace demands. Equally important, the simulation assessment *provides specific feedback on the quality and quantity of performance outputs*, applying the same standards as the workplace.

For instance, it's one thing to demonstrate a mastery of Excel, and quite another to prove you can use Excel to analyze the sales territory data or a budget variance report, and summarize the key information an executive should review.

3. Review and approve the task designs.

Much like approving blueprints before the foundation dig starts, this step ensures that the simulation assessment will realistically recreate real workplace situations and tasks, as well as assess all of the learning outcomes to the target proficiency levels.



This step includes clear definition of how participants will receive performance feedback, from whom (or from the simulation, or both), and what data the SimPort™ system will track for individuals and groups.

4. Build the simulated assessment, and test it thoroughly.

The power of the RLS SimPort™ technology makes this step exceedingly more feasible and cost-effective than other tools and applications. This stage also ensures end-user acceptance and ensures that participants are focused on demonstrating their competency rather than learning to navigate through the assessment simulation.

5. Deploy the simulation assessment.

Monitor and troubleshoot.

6. Determine its effectiveness on improving on-the-job performance by demonstrating individual proficiency and competency.

At the end of the day, what matters is whether those who successfully complete the simulation assessment perform to management's expectations on the job. By beginning with this outcome in mind, RLS ensures that the assessment simulation achieves that outcome, and adds value to individual participants and their organization.