Immersive Learning Simulations: Cutting through the Hype

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A Certified Performance Technologist, Deborah has received over 20 professional awards, including Microsoft's Award of Excellence for the Outstanding Performance Support System. A certified Human Performance Technologist, she has delivered over 75 presentations and three Masters' Series at various conferences and has co-authored numerous articles that focus on applying the latest, proven research to real-world performance solutions.

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Agenda

- Describe the role of immersive learning simulations (ILS) in improving workplace performance
- Apply appropriate learning strategies for ILS
- Describe lessons learned in applying the strategies
Definitions of ILS

...an optimized blend of SIMULATION, game element, and PEDAGOGY
   --Wexler et al. (2008)

...a TECHNIQUE-not a technology--to replace or amplify real experiences with guided EXPERIENCES.
   --Gaba (2004)

DESIGNED EXPERIENCE, where players participate in ideological worlds... to support a particular kind of REACTION.
   --Squire (2008)
## Fields that Use ILS

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<tr>
<th>Airlines</th>
<th>Education</th>
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Technical Scope of ILS
A Rose by Any Other Name…

- Problem- or Project-Based Learning
- Virtual Worlds
- Scenario-Based Learning (Clark, 2009)
- Role Plays
- Board Games
- Case Studies
- Blended Learning
- Mobile Learning

- Serious Games
- War Games
- On-the-Job Coaching
- Simulators
- Informal Learning
- Management
- Flight Simulators
A Continuum of ILS

Immersive Learning Simulations

• Simple
• Low Fidelity
• Inexpensive
• Interruptible
• Individual

• Complex
• High Fidelity
• Pricey
• Extended Flow
• Enterprise and Beyond
Buyer Beware!

- People use the same terms to mean different things.
- People use different terms to mean the same thing.
- No standards (Anthony et al., 2009)
  ◆ Judge training effectiveness
  ◆ Inform training developers
- Simulations can be costly!
- There’s a lot of hype out there.
Getting Beyond the Hype

Training Ain’t No Panacea

- Training is good for skill and knowledge.
- Training is bad at fixing problems arising from faulty workplace.
- Cost of training should be less than cost of the problem training addresses.
- Training doesn’t count until it transfers so workplace performance meets expectations.
✓ Describe immersive learning simulations (ILS) and their role in HPT
✓ Apply appropriate learning strategies for ILS
■ Describe lessons learned in applying the strategies
1: Train the whole task

- Rationale
  "Learning is promoted when learners are engaged at the problem or task level, not just the operation or action level" (Merrill, 2002, p. 45).

- Start with simpler, real problems and progress to harder ones

- Provide a representative number of problems
2: Keep the simulation authentic

- **Rationale**
  - ♦ Context matters
- **Learning by doing**
- **Match the training to the job**
- **Train how you fight; fight how you train**
- **Real consequences in a safe environment**
3: Provide scaffolding for domain-specific problem solving

- **Rationale**
- Coaching, supporting experts
- Error recognition and feedback
- Worked examples
- Advance organizers
- Articulation/reflection loops
4: Help learners index experiences to apply them later

- **Rationale**
  - We remember and apply what we encode, and learners need help encoding
- **Rules of thumb that cut across the problems and examples**
- **Know your place in the ballpark**
- **Provide integrated support for transfer**
The Opportunity with POST

- POST oversees training for CA peace officers.
- ID theft was reaching epidemic levels, especially in CA.
- POST decided to create e-learning to help patrol officers battle ID theft.
Identity Theft Training

DLS Group and POST
Agenda

- Describe immersive learning simulations (ILS) and their role in HPT
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Lessons Learned

- Simulations aren't a panacea. Avoid the "bandwagon blues."
- Focus on performance improvement in the workplace.
- Shape client expectations.
- We don’t fully know when and how to guide learners or let them explore.
- We don’t **YET** have a taxonomy of ILS specifying characteristics and tradeoffs.
- Keep it real enough--no more, no less
- Provide adequate prerequisite training
- Base simulations on task analysis representing exemplary performance (including mental models)
- Use prototyping, usability testing, and ongoing prioritization (timeboxing) to avoid scope creep
Reflection and Next Steps

**Shapes**

- What squared with you in a way that expanded familiar territory?
- What brought you back full circle?
- What angles are new? Is there something you haven’t bought into yet?
- What changes (deltas) will you be making when you get back to the job?
Thank you!

Your questions and comments