


Assessment by Simulation

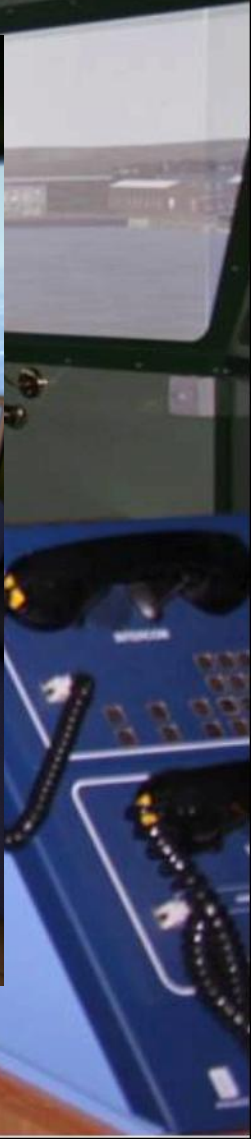


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Then



...and now.



And yet to come?...



What do I want to talk about tonight?

- Why assess?
- Backwash
- Reflective learning



Why assess?

(Reece & Walker 2003 p315)

- Diagnosis - Establish entry level/diagnose learning needs and/or difficulties.
- Feedback - Feedback to students.
Identify strengths and areas for development.
Reinforce learning.
Feedback to lecturers.
Motivate students.
- Standards - Maintained.
Certification.
Facilitate progression.
Predict future performance/selection.
Data for Quality Assurance Systems.
Qualify as “safe-to-practice”???

Feedback

(Vinceni et al 2009 p304)

Training Development

Conduct job analysis

- Identify tasks
- Infer relevant KSAOs
- Create task-KSAO linkage

Develop measures

- Determine which KSAOs to measure
- Determine measure format
- Consider raw data sources
- Develop national algorithms for aggregating raw performance data
- Design performance measures
- Develop scenario blueprint
- Identify data-collection points
- Determine diagnostic algorithms
- Determine feedback format

Develop performance standards

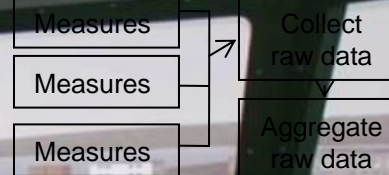
- Develop expert performance model
- Identify behavioural characteristics of performance continuum
- Determine diagnostic algorithms
- Determine feedback format

Training Delivery Cycle

Generate scenarios

- Events and scripts
- Embed measures

Deliver training content



Conduct performance assessment

- Estimate/update latent KSAOs
- Maintain record of historical performance

Determine instructional objectives

Provide performance feedback

Diagnose discrepancies

- Assess understanding
- Compare performance to standards
- Infer reasons for standards performance discrepancy

Training Evaluation

- Transfer to the job
- Impact on organisational goals

Feedback continued...

“The resulting performance measurements drive subsequent generation of scenario content tailored to the learner’s deficient KSAOs and permit the possibility of modelling performance changes throughout the training”

Vincenzi et al (2009, p306)



Backwash (Elton, 1987, p92)

- The effect of assessment on student learning.



Backwash (Elton, 1987, p92)

- The effect of assessment on student learning.

Perspective

Instructor's

Student's

Intended outcomes

Simulator usage

Assessment

Assessment

Learning activities

Outcomes

Adapted from Biggs and Tang (2009, p169) Teacher's and student's perspectives on assessment.



Reflective learning



“More than ever, as we put individuals in circumstances that require a flawless response or require them to act under extremes of stress or cognitive workload, we can no longer rely on the hope and expectation that they will perform such functions effectively the first time they are exposed to them”

Vincenzi et al, 2009, p. ix

Thank you...

