



Dedicated to innovation in aerospace

NLR - Netherlands Aerospace Centre

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15 years of experience in instructional design and research in aviation
Worked for KLM , Airbus and currently NLR

Leading projects for military and civil aviation organizations:

- ✓ Competency based training design (flight and maintenance)
- ✓ Enhanced use of simulation training devices
- ✓ Augmented Reality for maintenance training
- ✓ Introduction of F-35

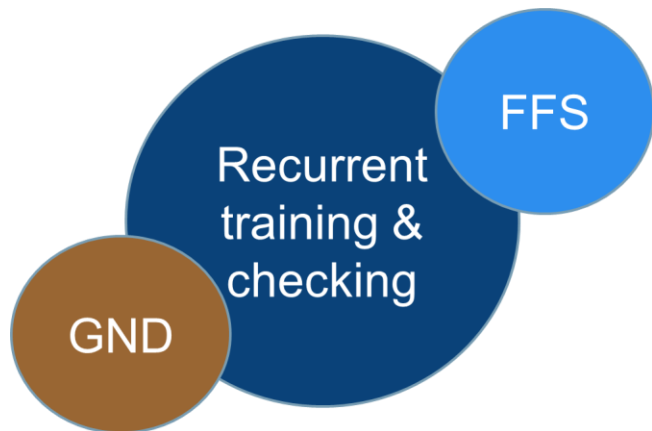


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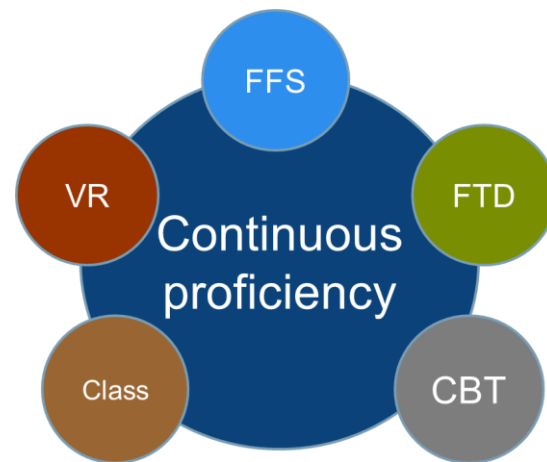
Workshop: Alternative training media and methods
RMT 0599 Main Group

Anneke Nabben, 1 February 2017

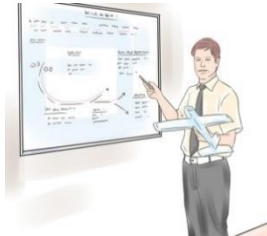
How to be ready for the future?



Optimal use of training means



Large choice



Selection of training media

Cool technology!
Promises!



Increasing effectiveness & efficiency

Training needs →

Training design



Media capabilities →

Media selection

Method for Optimal use of training means

MEDIA & TRAINING CHARACTERISTIC	FORMAL/INFORMAL	TYPE of Learning	PART-WHOLE task Training	ADAPTIVE learning	DEVICE	FIDELITY	INDIVIDUAL-COOPERATIVE	MOBILE-FIX	TOOL
TRAINING OBJECTIVE									
Applied knowledge									
Causal factors of Upsets									
Energy management									
Aerodynamics									
Skills									
Recognition									
Recovery									
Handling skills									
Manual Handling									
Automation Handling									
non technical skills									
Communication									
Situation awareness									
Workload management									
Leadership & teamwork									
Desicion making									

Training needs– Types of learning

Reproductive learning



- Reproducing solutions
- Basic knowledge, facts
- Standard /repetitive situations

Productive learning

- Producing solutions
- Creative, flexible skills (fluid intelligence)
- Apply in new/unknown situation



Training design - Types of instruction

Whole task practice



- Whole tasks that are practiced from the start
 - initially simplified
 - operational variations
- Integration of skills in real context

Part task practice

- Parts of whole tasks that are practiced separately
 - automation of skills



Media capabilities - Level of fidelity

Functional fidelity



Mental perspective:

- Extent to which a pilot can perform tasks in a training device in the same way as in the real aircraft and context

Physical fidelity



Physical perspective:

- The extent to which a training device matches the real aircraft and context

Training design – Types of training

Formal

- training department sets objectives
- training is mandatory
- self-paced or instructor-led



Informal

- trainee sets the objectives
- training is not mandatory
- may also be instructor-led

Effectiveness - Blended learning

Sequence Training & Balance Media



Effective & efficient media selection method

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Dedicated to innovation in aerospace

Fully engaged

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