BENEFITS OF LEARNING GAMES AND SIMULATIONS IN THE CLASSROOM ENVIRONMENT

BY
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ABILITY
SYNERGY OF YOUR ATTITUDE, KNOWLEDGE AND SKILLS

ATTITUDE
- KNOW WHY
  - COMMITMENT
  - PROFESSIONALISM
- PURPOSE
  - DISCIPLINE

ABILITY
- or
- COMPETENCE
  - ABILITY
    - PROCEDURES
  - or
  - COMPETENCE

KNOWLEDGE
- KNOW WHAT
  - SIMPLE
  - PROCEDURES

SKILLS
- KNOW HOW
  - SIMPLE
NOTECHS Categories

TEAMWORK

LEADERSHIP & MANAGEMENT SKILLS

SOCIAL SKILLS

SITUATION AWARENESS

DECISION MAKING SKILLS

COGNITIVE SKILLS
Learning games are Simulations

Learning by Doing or
Learning by Simulation

Simulation creates a situation where ideas, decisions, or actions can be tried out

Consequences are visible

No actual risk
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TRAINING

TECHNICAL SKILLS
FLYING SKILLS
Non-technical Skills

NON-TECHNICAL SKILLS
COMPETENCE and ABILITY

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EFFECTIVE LEARNING
METHODOLOGIES

LEARNING EFFECT

LOW STUDENT INVOLVEMENT HIGH

LEARNING EFFECT

MOST EFFECTIVE LEARNING

Lecture Questionnaires Discussions Video Cases Demonstrations Games / Role play Simulations

SDU – University of Southern Denmark

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LEARNING GAMES
ANALOGUE OR DIGITAL

FOCUSPOINT: Learning – Not entertainment
Safe to be challenged

It is OK to make mistakes

Mistakes can be evaluated

Individual learning in a dynamic social environment

Assessment of Non-Technical Skills (observable behaviours)
CREW SELECTION

Walther Harrison
Title: Pilot  Age: 44

Walther is very experienced after 10 years as a fighter pilot in the Royal Airforce in the UK followed by seven years as commercial pilot. Never in doubt and calm as a rock. Rumor says that he once crashed a jet fighter during training in the US.

Joan Lindström
Title: CA1 / CA  Age: 42

Joan is a very experienced stewardess and usually in the role as purser. She does not like too much small talk and apparently has no humor.
Weather at destination

Weather is deteriorating and snow clearing of runways is possible.

- A: Load extra fuel
  Default: Stick to the original fuel calculation.

Oven and coffee machine have no power.

There is no power in two outlets out of six in forward galley.

- A: Call for a technician to fix the outlets.
  Default: Use other outlets

- B: Check C/B and call for a technician to disconnect the two outlet modules.
9 CORE Competencies
ICAO EBT Doc 9995

- Flight Path Management - Automation
- Workload management
- Leadership and Teamwork
- Knowledge
- Situation awareness
- Communication
- Application of procedures
- Problem Solving and Decision Making
- Workload management
- Leadership and Teamwork
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• Introduction of Learning Games into crew training will:

- Enhanced learning effect by active participation
- Enhance the Non-technical Skills of the crew
- Visible Observable Behaviours
- Define problem areas for future training (EBT)
- Enhance Instructor’s Competence in Assessment
• Introduction of Learning Games into crew training will:
  - Connect classroom training to real world operation
  - Increase the value of the simulator training
  - Provide cost effective, efficient and fun classroom training
  - Engage and motivate the participants
  - Provide possibility for Assessment of CRM Skills in the classroom
Learning games has to be:

**Realistic** – a simulation of reality

**Simple** – simple presentation of complex problems

**Precise** – clear and precise learning objective

**Well designed** – focus on the *learning*, not technology

**Measureable** for the learning effect.
Benefits of Introducing Learning Games into Crew Training

- Increase the Learning Effect of CRM Training
- Enhancement of Simulator Training
- Enhancement of Crew Competencies
- Assessment of Non-Technical Skills
- Observation of Behaviours
- Cost Effective Training
WHO WAS IT?

Søren Seindal Agner, AEROTEAM

- Tour Guide, Cabin Crew, Operations
- Pilot
  - Danish Air Transport (Short 7)
  - Scandinavian Airlines (MD80)
- Ground Instructor – ATPL
- CRM Trainer / Examiner
- Multi Crew Course Instructor (MCCI)
- Training Manager
- Member of The Danish Flight Safety Council since 2010
- Human Factors in Civil Aviation
THANK YOU FOR YOUR ATTENTION!

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…if everything seems under control, you’re not going fast enough…