



SINGAPORE AVIATION ACADEMY

Enhancing Performance Effectiveness Through Competency Based Training Needs Analysis

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Competency-based Training Needs Analysis



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Identify current competencies

Define competencies needed for each task

Develop plans to close any competence gaps that may exist



Advantages for Organisation

Cost-effective

Goal-oriented

Proper
documentation

Clarifies job
standards

Framework for
performance
assessment

Improves
quality of
product and
service



Advantages for Employees

Clear performance expectations

Reference resource

Job satisfaction

Insight into organisation strategy

Tool for employee recognition



Three Types of Training Needs Analysis

Organisation

Examines training needed to alleviate problems and weaknesses of an agency

Task

Examines training needed to alleviate problems and weaknesses of occupational groups

Individual

Examines training needed to address individual's competency gaps



The organisational analysis should identify:

1. Future skill needs;
 - Compliance with action plans
 - Installation of new equipment
 - Changes in standards and procedures
 - Cultural change
2. Manpower requirement;
3. Resource availability; and
4. Changes in laws and regulations

(Sources of information to determine organisation competencies include: organisational goals and objectives, manpower planning, efficiency indices, plans for reorganisation or job restructuring, audit observations, and employee attitudes and satisfaction surveys.)



The task analysis should identify:

1. Tasks that have to be performed;
2. Conditions under which tasks are to be performed;
3. Standards of performance required;
4. How often and when tasks are performed;
5. Skills and knowledge required to perform tasks; and
6. Where and how these skills are best acquired

(Sources of information to determine task competencies include: Job description, KSA analysis, performance standards, observation of job/sample of work, job inventory questionnaire, review literature about the job, asking questions about the job and analysis of operating problems.)



The individual analysis should identify:

1. How well an individual employee is doing a job and determines the individual's capacity to do new or different work; and
2. Information on employee's training needs.

(Sources of information to determine individual competencies include: Performance evaluation, observation, work samples, interviews, questionnaires and attitude surveys.)

Case Study: Search and Rescue Standardised Training Package



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7-week course

- ICAO SAR conventions and annexes
- Harmonisation of aeronautical and maritime SAR procedures
- SAR organisations and resources
- SAR procedures
- COSPAS & SARSAT
- Maritime SAR procedures and terminologies
- Search effort allocation
- Meteorology for SAR
- Overview on aspects of public relations
- Using the scientific calculator
- Use of Manoeuvring Board and universal plotting sheet
- Intercept and escort plotting
- Sector search calculations
- Search area determination



Considerations for development of Search and Rescue Standardised Training Package



Regulations:
ICAO Annex 12
IAMSAR Vol. I, II, III



Changes in
technology and
equipment



Resources
availability



Manpower
availability

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- **Search area determination**



3-week course

- Aircraft emergency phase
- Plotting of aircraft interception
- Determine datum of aircraft
- Prepare search and rescue action plan
- Allocate resources to search area
- Follow up search and rescue operation progress
- Evaluate search and rescue operation outcome



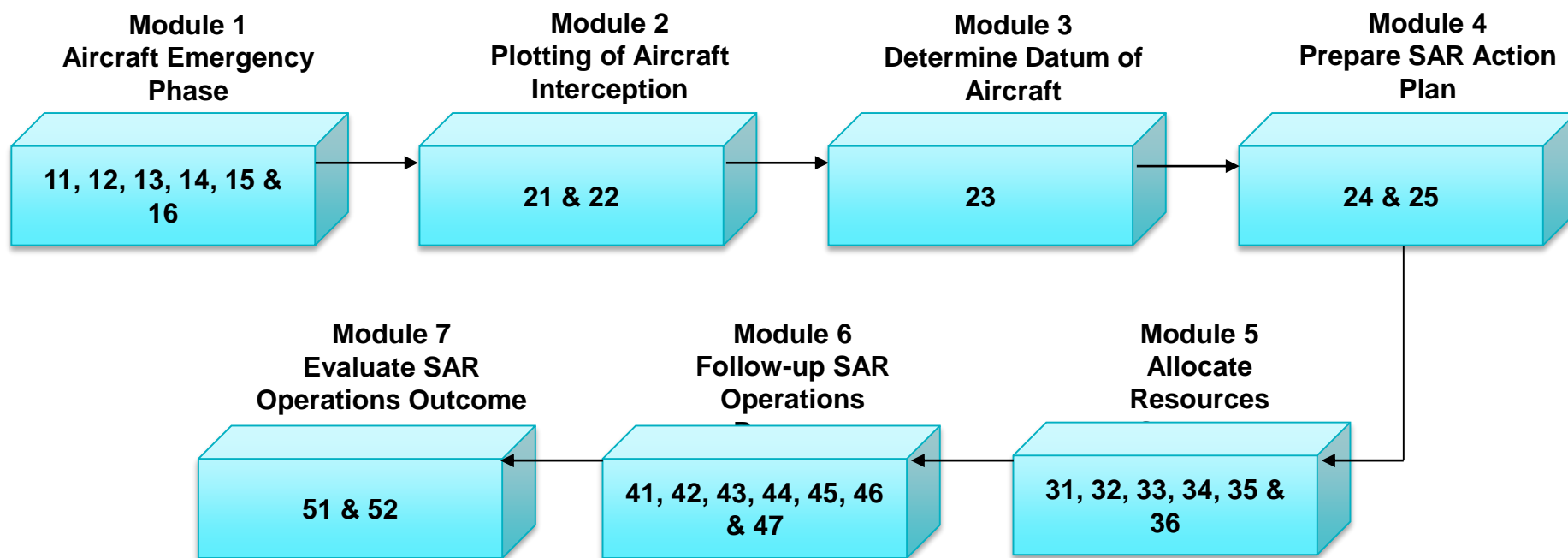
Case Study: Search and Rescue Standardised Training Package



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Search and Rescue Operations

Learning Sequence Diagram



Task 11: Review notifications of aircraft in distress

Task 12: Gather information about distress aircraft situation

Task 13: Coordinate with adjacent ACC / RCC when appropriate

Task 14: Document all information collected

Task 15: Assess information collected

Case Study: Search and Rescue Standardised Training Package



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4 weeks

The number of weeks saved from conducting the new Search and Rescue course

1,920 hours

The number of man-hours saved from personnel taken away from operations

\$10,000

The estimated amount of money saved from engaging instructors



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Thank you