

**IALA COUNCIL
56th Session**

**December 9 - 13, 2013
Goa
India**

Agenda item 9 – IALA TECHNICAL ACTIVITIES

9.5 VTS

9.5.1 Documents submitted for approval

9.5.1-4 Draft Guideline Train the Trainer

Note by the Secretariat

1 SUMMARY

This Guideline is to assist maritime training organizations and their teaching staff in the preparation and introduction of new training courses.

During the review process the group decided that because there was no in depth syllabus as per the other V-103 model courses, this document would be better placed as a Guideline and is submitted as such.

2 ACTION REQUESTED

The Council is requested to Approve the draft Guideline

IALA Guideline No. #####

on

Train the Trainer

Edition 1

September 2013



10, rue des Gaudines
78100 Saint Germain en Laye, France
Telephone: +33 1 34 51 70 01 Fax: +33 1 34 51 82 05
e-mail: contact@iala-aism.org Internet: www.iala-aism.org

Document Revisions

Revisions to the IALA Document are to be noted in the table prior to the issue of a revised document.

Date	Page / Section Revised	Requirement for Revision

3 FOREWORD

Competent and/or VTS authorities are encouraged to adopt this Guideline, in conjunction with IALA Recommendation V-103 and associated model courses as the basis for mandatory training in a manner consistent with their domestic legal framework.

The International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) has been associated with Vessel Traffic Services since 1955 and recognises the importance of human resources to the development of efficient Vessel Traffic Services worldwide.

Taking into account the International Convention on Standards of Training, Certification and Watchkeeping of Seafarers, 1978, as amended in 1995 (STCW Convention) and the adoption of Resolution 10, IALA adopted the revised Standards of Training and Certification of VTS Personnel contained within Recommendation V103.

The model courses subsequently developed by IALA for VTS Personnel are:

Model Course V-103/1 - VTS Operators

Model Course V-103/2 - VTS Supervisor

Model Course V-103/3 - On-the-Job Training

Model Course V-103/4 – On the Job Training Instructor

These model courses are intended to provide Competent / VTS Authorities charged with the provision of Vessel Traffic Services with specific guidance on the training of VTS TTIs (Teachers, Trainers and/or Instructors). They may be used by maritime training organisations, and assistance in implementing any course may be obtained through IALA at the following address:

The Secretary General,

IALA/AISM,

10, rue des Gaudines

78100 Saint Germain en Laye

France

Tel: (+) 1 33 34 51 70 01

Fax: (+) 1 33 34 51 82 05

e-mail: contact@iala-aism.org

Table of Contents

Document Revisions	3
1 Foreword	4
1. PART A - Overview	6
1.1 Overview	6
1.2 Purpose of the Guideline	6
1.3 Target Group	6
1.4 Use of the Guideline	6
2 Part B – Implementation of the guideline	7
2.1 Introduction	7
2.2 Lesson Plans	7
2.3 Subject Outline	7
3 Part c – Guidelines for Facilitators	8
3.1 Introduction	8
3.2 Modular Presentation	8
3.3 Assessment	8
3.4 Implementation	9
4 PART D – Course Modules	10
4.1 Course Development	14
4.1.1 Introduction	14
4.1.2 Content	15
4.2 Instructional Techniques	15
4.2.1 Introduction	15
4.2.2 Content	16
4.3 Communication	16
4.3.1 Introduction	16
4.3.2 Content	16
4.4 Assessing Performance	16
4.4.1 Introduction	16
4.4.2 Content	17
4.5 Training Management System	17
4.5.1 Introduction	17
4.5.2 Content	17
APPENDIX A LESSON PLAN	18
Appendix B TEACHING METHODS	20
APPENDIX C DEFINITION OF VERBS	21
APPENDIX D DEBRIEFING PROCESS	24
APPENDIX E PRINCIPLES OF FEEDBACK	27

1. PART A - OVERVIEW

3.1 Overview

IALA recommends that training providers utilise approved training courses as per IALA Guideline 1014. This guideline is meant to complement IALA Model Courses V103/1 – VTS Operator, V103/2 – Vessel Traffic Services Supervisor Training, V-103/3 - On-the-Job Training, V-103/4 – On the Job Training Instructor and IALA Guideline 1027 – Simulation in VTS Training. Wherever in this document a reference to one of the model courses is made this is meant as an addition to the 'Train the trainer' guideline.

In order to set up an effective and efficient training system a Training Management System (TMS), should be in place according to the requirements in IALA Recommendation V103, including continuous professional training of teachers, instructors and assessors.

3.2 Purpose of the Guideline

The purpose of the guideline is to assist maritime training organizations and their teaching staff in the preparation and introduction of new training courses for (future) Trainers, Teachers and/or Instructors (further referred to as TTI's), and in enhancing, updating or supplementing existing training material where the quality and effectiveness of the training courses may thereby be improved.

This document provides facilitators with guidance on the content, sequencing and material required to train future TTI's.

3.3 Target Group

This Guideline is designed for personnel of an accredited training organization assigned with the task of training professionals of VTS within that organization. This Guideline is aimed at facilitators who train teachers, trainers or instructors within the VTS organization. Staff training VTS personnel will themselves perform on or above standard with regard to the topics they teach.

Facilitators should ideally possess an appropriate academic qualification approved by the competent authority. Staff already qualified in the field of teaching and learning, by means of a training equivalent to IALA guidelines or beyond, should not have to undergo Train the Trainer training.

The TTI participating in a course should receive a certificate upon satisfactory completion of the module course.

3.4 Use of the Guideline

The Guideline comprises five modules, each of which deals with a specific subject representing a task or role of the future TTI. Each module contains a subject framework stating its aims and subject outline.

The Guideline aims at providing facilitators with different tools, such as methods and procedures to develop/adjust (parts of) the training, adequate teaching methods, and methods to evaluate the training, hereby assuring quality of training in the facility. The information in this document has been drawn up by an international group of experts in the area of Training. The experts are all IALA participants, striving for uniformity of this standard.

4 PART B – IMPLEMENTATION OF THE GUIDELINE

4.1 Introduction

All training and assessment of personnel seeking qualification as a TTI should be:

- 1 structured in accordance with written programmes, including such methods and means of delivery, procedures and course material as are necessary to achieve the prescribed standard of competence; and,
- 2 conducted, monitored and assessed by persons qualified in accordance with the TMS.

Training staff should review the course outline and detailed syllabus in each subject. The actual level of knowledge, skills and prior technical education of the TTIs in the subject concerned should be kept in mind during this review. A gap analysis may reveal any differences between the competencies of the TTIs and those described in a detailed training syllabus.

To compensate for such differences, facilitators are expected to adjust the course accordingly. This means to modify the course, or reduce the emphasis on, items dealing with those competencies already attained by the TTIs. The gap-analysis provides insight into the competencies which have not already been acquired, and may need extra attention.



4.2 Lesson Plans

Facilitators should draw up lesson plans based on a detailed syllabus and the references to the textbooks and teaching material suggested for the course. Where no adjustment has been found necessary in the subjects of a detailed syllabus, the lesson plans may simply consist of the topics indicated in the detailed syllabus with keywords, timeframes and required materials.

Each competence should be defined in terms of the learning objectives, required knowledge, skills and attitude. The recommended competence for each subject is indicated in the subject outline of each module.

4.3 Subject Outline

The subject outline of each module also includes a total recommended number of hours that should be allocated to each module. However, it should be appreciated that these allocations depend upon the gap-analysis. Training organizations should therefore review carefully lesson plan design and consider the need to reallocate the time required to achieve each specific learning objective.

5 PART C – GUIDELINES FOR FACILITATORS

5.1 Introduction

This Guideline is designed for adult TTIs. Throughout the years it has been recognised that the strategy used by adult TTIs differs from the strategy used by younger students. In order to have the maximum effect of training it is crucial to use the appropriate learning methods.

5.2 Modular Presentation

The modular presentation enables facilitators to modify the course content and provide any revisions of the objectives as required. Facilitators should draw up lesson plans based on each detailed syllabus and the references in them to textbooks and teaching material suggested for the course.

The subject outline of each module also includes a recommended assessment of the time that should be allocated to each subject. However, it should be appreciated that these allocations depend on the entry level of the TTIs. Facilitators should therefore review carefully these assessments during course and lesson plan design and consider the need to reallocate the time required to achieve each specific learning objective.

A detailed teaching syllabus of each module should be written in learning-objective format. The objective determines what the TTI must do to demonstrate that knowledge has been transferred. All objectives are understood to be prefixed by the words:

‘the expected learning outcome is that the TTI has acquired the recommended levels of competence in conducting training’

In preparing a teaching scheme and lesson plans, facilitators are free to use any teaching method or combination of methods that will ensure that TTIs can meet the stated objectives. However, it is essential that TTIs attain all objectives set out in each syllabus.

5.3 Assessment

Continuous assessment of TTIs should be undertaken. In many cases the assessment can be based on the TTI's competence, demonstrated via assignments. These assessments are required for the purpose of certification.

Following Bloom's taxonomy on learning strategies, 6 levels of cognitive learning can be distinguished, 5 levels of affective learning and 5 levels of psychomotor learning. When these are applied to the profession of VTSO, the following levels can be distinguished: 1) Remember 2) Understand 3) Apply 4) Analyse/Synthesise 5) Evaluate 6) Create.¹



Appendix C contains the verbs attached to this taxonomy. These verbs structure the exam and assessments and give weight to questions/assignments/exercises, etc.

¹ It is recognised that alternative versions of Bloom's taxonomy exist in the IALA V103 Model Courses. However, in this Guideline it is considered more appropriate to use this newest version.

5.4 Implementation

For any course to run smoothly and effectively, considerable attention must be paid to the availability and use of:

- qualified facilitators
- support staff
- facilities
- equipment
- textbooks, technical papers
- computers, internet connections
- audio/video material
- other reference material.

Thorough preparation is key to successful implementation of a course.

6 PART D – COURSE MODULES

A complete course would comprise of a number of modules, each of which deals with a specific subject representing a requirement or function of a TTI.

Competence Area	Aims and Objectives	Recommended Hours per Module	
		Lecture	Exercise
Training development	<ol style="list-style-type: none">1) Make a gap analysis2) Translate training needs into teaching goals.3) Describe learning objectives4) Describe and use the SMART acronym5) Sequence the training elements logically6) Draw up a lesson plan7) Link objectives to parts of the syllabus8) Identify teaching aids and reference material9) Make a time schedule10) Evaluate and adjust the training	2	4

Competence Area	Aims and Objectives	Recommended Hours per Module	
		Lecture	Exercise
Instructional Techniques Teaching Methods Classroom Instruction Simulator Instruction	1) Describe and apply a variety of teaching methods. 2) Explain the advantages and disadvantages of each method 3) Link teaching methods to learning objectives 4) Choose a student centred approach. 5) Prepare a lesson 6) Tailor instruction to student's needs 7) Know how to operate equipment 8) Familiarise with the exercises and the scenarios that will be used 9) Show an understanding of the influence of the TTI's teaching style on the learning process 10) Establish a safe classroom atmosphere 11) Manage disruptive behaviours 12) Identify and manage barriers to learning	2	4

Competence Area	Aims and Objectives	Recommended Hours per Module	
		Lecture	Exercise
Communications <ul style="list-style-type: none"> - Briefing - Debriefing, see Appendix A. - Feedback, see Appendix E. 	<ol style="list-style-type: none"> 1) Conduct a thorough and clear briefing of an exercise. 2) Conduct a debriefing according to IALA Guideline 1027 and principles in Appendix A. 3) Communicate assessment decision effectively 4) Give constructive feedback according to the principles of feedback in Appendix E. 5) Apply various questioning techniques. 	2	5

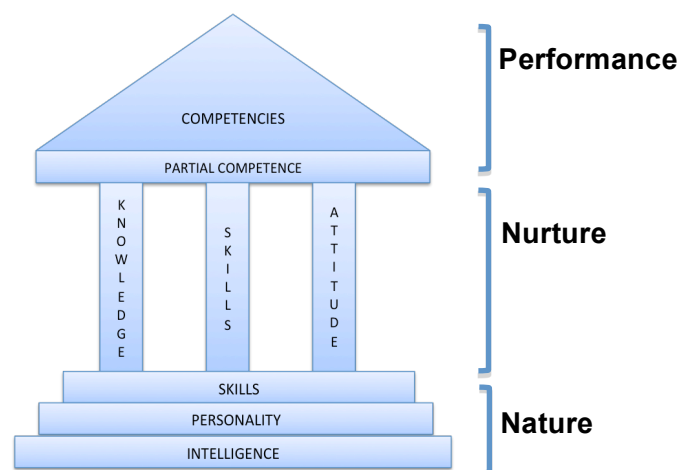
Competence Area	Aims and Objectives	Recommended Hours per Module	
		Lecture	Exercise
Assessment - Assessing Performance, - Assessment Issues,	1) Know different methods for assessing performance. 2) Explain the importance of objectivity while assessing performance. 3) Distinguish observations from interpretations. 4) Make an assessment exercise or exam. 5) Develop an appraisal form for the assessment of performance. 6) Describe some basic considerations about performance scales and determine success criteria. 7) Describe the terms reliability and validity. 8) Know how to achieve consistency between assessors 9) Make a connection between the feedback provided and the learning goals.	2	4

Competence Area	Aims and Objectives	Recommended Hours per Module	
		Lecture	Exercise
Training Management System <ul style="list-style-type: none"> - Quality Control - Evaluations 	1) Maintain records of students' performance (conforming to IALA Guideline 1014 Accreditation and Approval Process for VTS Training). 2) Share information with authorised personnel. 3) Prepare information detailing the roles and responsibilities of the TTIs. 4) Describe the effect of privacy legislation on the sharing of information. 5) Evaluate the course. 6) Is able to make the distinction between content validity and criterium validity. 7) Understand and implement the TMS determined by their organization (conforming to IALA Guideline 1014). 8) Maintain course materials and records following a systematic approach.	2	3

6.1 Course Development

6.1.1 Introduction

TTIs should be skilled in the development of training curricula. Although a training programme may be present and available to the training staff, from time to time the training programme will require modifications. It is almost impossible to adjust or develop a training programme if there is no basis in terms of a job-description or competence profile. The job-description or competence profile will have to be translated into learning goals. Making changes to a training programme without referring to learning goals will never be an improvement and must be discouraged.



Competencies are the way that people in general deal with work and other people. They are the combination of personality, intelligence and innate skills together with acquired knowledge, skills and attitude, mastered during one's lifetime.

Besides a competence profile facilitators will want to know what the entry-level of his TTI is. This can be determined by a gap analysis, or an entry test, or by reviewing and discussing prior experience of the TTIs. This will give facilitators essential information regarding the sequencing of topics and the amount of time allocated to each topic.

It is important to set up a time table in order to develop course material, exercises and/or simulator training. TTIs should ensure that sufficient time is taken in order to ascertain that resources (such as simulator time) are available. Exercises should be tested and validated before they are adopted into any training programme.

A vital element in this preparation is the development of a lesson plan. The use of a lesson plan not only gives the course a sound foundation but also raises the TTI's awareness regarding the course content, aims and objectives/goals, teaching methods, structure and timing, course materials and facilities.

A thorough evaluation of a course is only possible if the goals of this course are described prior to its execution according to the SMART acronym. SMART stands for:

S = Specific

M = Measurable

A = Achievable

R = Realistic

T = Time scaled

6.1.2 Content

While there are many formats for a lesson plan to choose from, a lesson plan should at least contain the following elements:

- Title of the lesson.
- List of objectives, which may be knowledge (what the TTI knows at lesson completion) and/or skills (what the TTI can do at lesson completion).
- The different components/elements the course contains.
- The sequence of components.
- The teaching methods to be used for each particular component, for example instruction, videos and exercises.
- List of required training materials and facilities.
- Time required to complete the lesson plan.
- How the course will be evaluated.
- How the TTI will analyse the effectiveness of the training.
- An evaluation report, suggesting changes in the lesson plan, course material, facilities, etc.

A template for a lesson plan can be found in Appendix A

6.2 Instructional Techniques

6.2.1 Introduction

There are many teaching methods available to enhance adult learning. A sound balance of teaching methods greatly improves the level of activity of the students, their involvement in course-activities and thereby the learning process. It is of the utmost importance that the TTI is familiar with a variety of teaching methods and consciously applies them where appropriate. A well designed course will typically contain different teaching methods.

The active involvement of TTIs in a course has proven to increase the ability to learn, to retrieve and apply the learned knowledge and skills to a large extent. Furthermore when TTIs are aware of what the goals of the training are and what is expected of them by the end of the training

programme, they maintain their focus, apply their own learning strategies and therefore improve the end result.

Training should always be learner-centered and not TTI-centered.

6.2.2 Content

The TTI will learn about the different teaching methods and how to include these in their lesson plans. The outcome should be a balanced teaching plan which contains a number of different teaching methods encouraging the involvement of the TTI. A number of teaching methods are shown in Appendix B.

6.3 Communication

TTIs should have extensive knowledge about briefing and debriefing the student. In order to enhance learning, every activity should be as learner-centred as possible. Good communication skills form the foundation for all learning activities.

6.3.1 Introduction

A TTI should possess excellent communication skills. Communication however, is not a skill that people possess by nature. The skill must be learned, maintained and developed. This provides the TTI with the tools required to conduct a good briefing and debriefing.

The learning process starts during the briefing, but both briefing and debriefing are critical parts of the learning process. Briefing and debriefing, although instructor-lead, are recommended to be TTI centred.

Therefore, good social skills amongst which sensitivity and interpersonal skills combined with excellent communication skills and an understanding of diversity (including cultural differences) are required. A TTI should be assessed regarding the possession of these skills prior to their appointment.

6.3.2 Content

The TTI should learn how to conduct a successful briefing and debriefing. They should learn which elements should be included in the briefing and practice giving the briefing to a TTI, acting as a trainee.

It is advised to teach how to conduct a debriefing and practice the technique in Appendix B. By doing so the debriefing technique shall contribute to the learning process.

The principles for giving feedback are essential to the role of the TTI. They should practice this skill after having acquired knowledge of the principles.

6.4 Assessing Performance

During this module the TTI will gain full understanding of the importance and methodological constraints of assessing performance.

6.4.1 Introduction

While assessing performance, methodological and statistical considerations should be made. Assessing performance is more complex than creating questions or giving someone an exercise. Methodologically the assessment should meet the learning objectives and be a reliable and valid instrument. It is important for TTIs to understand some of the constraints that may arise during assessment.

Assessments may be conducted by several means, for example multiple-choice tests, open questions, case studies, interviews or simulation exercises. TTIs should be able to determine what is an appropriate appraisal system, in order to make a reliable and valid assessment.

6.4.2 Content

TTIs learn about the complexity of developing a good assessment. They will be able to link the assessment to learning objectives, develop the assessment, choose an appropriate scale and compare the outcome to specified criteria. Finally they evaluate the effectiveness (validity) of their assessment and maintain or improve reliability of tests/exams.

6.5 Training Management System

6.5.1 Introduction

While preparing, training, assessing or modifying the course, facilitators should keep a track record of actions taken. They should also keep personal records about the TTIs and their learning progress. It is recommended that the training organization implements a TMS.

6.5.2 Content

TTIs should use the TMS of the training organization they represent. They should understand applicable regulations regarding confidentiality and accessibility to training information. TTIs should be familiar with the process of revising course material in accordance with the TMS. The training organization should ensure that the TTIs use peer review and/or supervision. This may lead to an increase of the reliability of training and assessment.

APPENDIX A LESSON PLAN

Lesson name & ID			
Target Group			
Learning objectives			
Activity/teaching method		Material	Time required
1			
2			
3			
4			

5			
6			
Assessment			
Evaluation			
Modifications			
Signature		Date	

APPENDIX B TEACHING METHODS

The following is a list of possible teaching methods that can be used in training.

Passive

- Teaching
- Reading reference material
- Watching video
- Listening to audio material
- Making exercise questions
- Observation
- Exchange experience

Semi-active

- Guided discussion
- Case study
- Asking questions
- Pair work
- Group exercise
- Essay

Active

- Excursion
- Role play
- Presentation
- Making puzzles
- Simulation exercise
- Quiz
- Game
- Fieldwork
- Making questions
- Teaching by student

APPENDIX C DEFINITION OF VERBS

Level 1: A basic knowledge of the subject. It is the ability to remember essential points, to memorise data and retrieve it.

Verb	Definition	Example
Define	State what it is and what its limits are; state the definition	Define information service.
List	Say one after the other	List the main structural components of a vessel.
Name	Give name of objects or procedures	Name the key national and international maritime organisations.
Recognise	To know what it is because you've seen it before	Recognise a developing traffic situation.
State	Say or write in a formal or definite way	State the navigational hazards to vessels.

Level 2: The ability to understand and to discuss the subject matter intelligently in order to represent and act upon certain objects and events.

Verb	Definition	Example
Characterise	To describe the quality or features in something	Characterise the main features of AIS.
Consider	To think carefully about it	Consider the use of a message marker (e.g. 'warning').
Demonstrate	Describe and explain; logically or mathematically proves the truth of a statement	Demonstrate the benefits and use of a CPA-tool.
Describe	Say what it is like or what happened	Describe the main features of your VTS-area.
Differentiate	Show the differences between things	Differentiate between different types of vessels.
Explain	Give details about something or describe so that it can be understood	Explain the purpose and function of a RADAR.
Take account of	Take into consideration before deciding	Take account of the limitations of a RADAR.

Level 3: A thorough knowledge of the subject and the ability to apply it with accuracy. The ability to make use of knowledge to develop plans and activate them.

Verb	Definition	Example
Act	Carry out, execute	Take action to avoid a dangerous traffic situation.
Apply	Use something in a situation or activity	Apply standard operating procedures.
Appreciate	To understand a situation and know what is involved in a problem-solving situation, to state a plan without applying it	Appreciate the limitations of different vessel types.
Assist	Help somebody to do a job by doing part of it	Assist in the on-board decision making process.

Verb	Definition	Example
Calculate	To discover from information you already have by arithmetic; to think about a possible cause of action in order to form an opinion or decide what to do	Calculate under keel clearance.
Check	Make sure the information is correct (satisfactory)	Check availability of allied services (e.g. tugs or pilots).
Choose	Select out of number, decide to do one thing rather than another	Choose appropriate lock sequencing.
Collect	Assemble, accumulate, bring or come together	Collect examples of different error types, their causes and consequences in a VTS.
Decode	Turn into ordinary writing, decipher	Decode and interpret the content of weather charts.
Estimate	Form an approximate judgement of a number, form an opinion	Estimate distance and direction between two points.
Execute	Perform action	Execute a VTS sailing plan.
Extract	Copy out, make extracts from, find, deduce	Extract pertinent data from relevant sources to calculate ETA.
Identify	Establish the identity or recognise/distinguish	Identify the potential traffic conflicts
Inform	Pass on information	Inform supervisor of an emergency situation.
Initiate	Begin, set going, originate	Initiate search and rescue operations.
Issue	Send forth, publish	Issue new standard operating procedures.
Maintain	Carry on, keep up, refresh	Maintain a good situational awareness.
Monitor	Keep under observation	Monitor the traffic image.
Obtain	Acquire easily, without research	Obtain information during a handover process.
Operate	Conduct work on equipment	Operate the various items of equipment in the VTS centre.
Perform	Carry into effect, go through, execute	Perform communication according to standard operating procedures.
Relay	Arrange in, provide with, replace by	Relay a distress message.
Respond	Make answer, perform answering or corresponding action	Respond to distress and urgency messages and signals.
Transfer	Hand over, pass on	Transfer information to an adjacent VTS.
Update	Refresh, make up-to-date	Update the operational procedures.
Use	Employ for a purpose, handle as instrument, put into operation	Use SMCP.

Level 4: Ability to establish a line of action within a unit of known applications following the correct chronology and the adequate methods to resolve a problem situation. This involves the integration of known applications in a more unfamiliar situation.

Verb	Definition	Example
Allocate	Assign, devote	Allocate a new lock sequence.
Analyse	Examine minutely the constitution of	Analyse and consider the information provided by the radar equipment.
Assign	Allot as a share, make over	Assign an alternative berth.

Verb	Definition	Example
Coordinate	Bring part into proper relation	Coordinate berthing resources.
Delegate	Commit authority to somebody	Delegate a task to a guard vessel.
Ensure	Make safe, make certain	Ensure the agreed course of action is carried out.
Integrate	Combine into a whole, complete by addition of parts	Integrate current conditions into the management of traffic.
Manage	Handle, conduct	Manage traffic for deep water routes in the VTS area.
Organise	Give orderly structure to, frame and put into working order	Organise priority of vessel movement in a narrow channel.
Predict	Forecast	Predict future positions of vessels in the waterways.
Provide	Supply, furnish	Provide information on requirement for new VTS equipment.

Level 5: Ability to evaluate decisions in order to re-establish new procedures or changes in task design and/or the manpower in the organisation. It is the ability to manage errors and modify working procedures.

Verb	Definition	Example
Balance	Weigh (a question, two arguments, etc., against each other)	Balance demands from different stakeholders.
Evaluate	Ascertain amount of, reflect on or review	Evaluate decisions taken by a VTSO in an ad-hoc situation.
Recommend	To advise based on an evaluation or research	Recommend to the management a change in operational procedures.
Select	Pick out as best or most suitable	Select scenarios for refresher training
Appraise	Evaluate an individual's performance	Conduct an appraisal interview
Decide	Determine a course of action	Decide on a change to a VTS sailing plan.

Level 6: Ability to create something new, to design e.g. course material and/or simulation exercises or new operational procedures. This may be the ability to translate training needs into learning objectives and finally into learning material.

Verb	Definition	Example
Design	Design course material	Translate learning objectives into course material and resources.
Structure	Arrange in a logical sequence	Structure according to competence and required level of complexity
Test	Try out and modify material	Test and evaluate new operational procedures before use.
Validate	Establish the effectiveness	Validate the effectiveness of assessments or exams

APPENDIX D DEBRIEFING PROCESS

This appendix is a practical tool to be used in the debriefing of exercises.

Make the debriefing trainee-centred.

During the debriefing process, trainees (not the instructors) analyse and reflect on their performance. This enhances the learning process. During the exercise itself trainees are very busy processing information. During the debriefing they have the opportunity to reflect and comment on their performance. Instructors facilitate this process and encourage trainees in their analysis, without taking over the analysis. A trainee-centred approach not only stimulates learning, but also improves the trainees' ability to analyse, reflect on and evaluate their own performance.

Instructors should restrict themselves to the learning objectives of the exercise. If an exercise was unsatisfactory, the debriefing process should only focus on a few major points. In such a case it is especially important to give positive feedback as well. Facilitation does not mean that instructors cannot give their opinion.

Encourage the trainee to be active during the debriefing.

The logic behind this form of debriefing is that adults learn and retain information better when they are active. Talking about their performance generally forces them to 'relive' the exercise thus processing the exercise for a second time. When trainees listen passively to their instructors their brain may have a lower activity mode. Furthermore this technique gives trainees the opportunity to consider alternative solutions.

Encourage self-analysis.

In a debriefing, the objective for instructors is to lead the self-analysis. Trainees do most of the talking and analysing. It is the responsibility of instructors to ensure that the trainees' analysis is correct. This may differ from the instructors' opinion. During a good debriefing, trainees usually will come up with a better solution.

The ability to analyse their own performance varies amongst trainees. When trainees fail to make a good analysis, instructors should not take over. By asking questions they lead the student towards a good analysis. The technique to enable this is described below.

The task of the instructor is to ask questions. The debriefing may start with the following questions:

- 1) What went well?
- 2) What could have gone better?
- 3) How could you have done things differently?
- 4) How would you improve your performance?

The instructor gives the student enough time to mention all relevant points.

What instructors do

- complete missed learning goals
- correct erroneous statements of the trainees
- provide necessary information
- give positive feedback

- encourage quiet trainees
- provide all (including high-performing) trainees with sufficient time for their analysis

What instructors avoid

- making it an instructor-oriented session
- analysing before the student has done so
- giving the impression that the student is guided towards an answer. This will reduce their motivation to self-analyse significantly
- giving the impression that only the opinion of the instructor counts
- interrupting the student
- making it a cross-examination

Advantages of this method of debriefing

Trainees become accustomed to reflecting on and evaluating their performance.

Trainees will not only answer the 'what' question but especially the 'why' question (more in-depth analysis). Trainees may more easily apply what is learned.

Disadvantage of this method of debriefing

This method of debriefing can be more time consuming.

Example 1 - A good example

Trainee: I don't know what went wrong. Did I see it too late?

Instructor: Did you see it too late?

Trainee: Well I saw it, but I thought he was going to starboard?

Instructor: Why did you think that?

Trainee: Well, I told him that, I assumed that he would do it?

Instructor: What would you do differently next time?

Trainee: Well I'd rather check whether he really is going to do it.

Example 1 - A bad example

Trainee: I don't know what went wrong. Did I see it too late?

Instructor: Well I think so, next time check whether he really intends to go starboard.

Example 2 - A good example

Trainee: I thought it was going well in the traffic separation scheme.

Instructor: Yes? Why did it go well?

Example 2 - A bad example

Trainee: I thought it was going well in the traffic separation scheme.

Instructor: Yes, I agree. Next point then.

Example 3 - A bad example

Trainee: I think that it went well with that tanker. What do you think?

Instructor: Yes, I agree.

Example 3 - A good example

Trainee: I think that it went well with that tanker. What do you think?

Instructor: Why do you think it went well?

APPENDIX E PRINCIPLES OF FEEDBACK

The aim of feedback is to influence someone's behaviour. In order to be effective it is important to understand the principles of feedback.

SENDER (the party giving feedback):

- 1) Say what you actually observe, without judgements and without interpretations.
- 2) Focus feedback on behaviour or performance, not on the person, their character or physical characteristics. Restrict yourself to matters which the other person can change.
- 3) Stay in the here and now: do not consider the past.
- 4) Show that it is your opinion by your use of language ('in my opinion..., I think...')
- 5) Address the person in question. Give feedback to people, not about people.
- 6) Timing: is it a good time? Try to discuss these matters in private.
- 7) Do not overload the receiver. Limit yourself to the most important issues.
- 8) State the effect that the other person's behaviour has on you. Generally that is enough, and certainly better than giving the other person advice on what he or she should do.
- 9) Directly after that, and only if necessary, give your evidence based judgement on what the other person has done.
- 10) Take the receiver into consideration: is what you are saying useful to them?
- 11) Give positive feedback as well.
- 12) Requested feedback is more welcome than non-requested.
- 13) Always check whether the other person has understood your feedback.

RECEIVER (the party receiving feedback):

- 1) See feedback as a chance to learn and not as criticism.
- 2) Adopt an open listening attitude. Do not interrupt the other person and do not immediately enter into a discussion or defend yourself.
- 3) Ask for clarification of what you do not understand.
- 4) Thank the feedback sender for their effort.
- 5) Accepting feedback does not mean that you agree with it. You could have a different point of view on your behaviour.

You are not obliged in any way to act on suggestions; in the end you decide whether or not you want to change your behaviour.

Feedback is often given in response to behaviour that is experienced as negative. Feedback which is not formulated as a demand, can be appreciated for what it is: information