INTERACTIVE ROOT CAUSE ANALYSIS (IRCA) AS A PRACTICAL TOOL FOR DEVELOPING MANAGEMENT SKILLS (FOR MASTERS IN NAVIGATION)

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Having good strong problem solving skills can make huge difference to future career of an officer. Most of all human error types on ships are caused by making ineffective solutions with sometimes painful consequences.

The standards of officers of the merchant fleet training are based on the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, as amended. There are seven functional areas, at three different levels of responsibility provided by STCW Code. The levels of responsibility are: **management level** (applied to senior officers), **operational level** (applied to junior officers) and **support level** (applied to ratings forming part of a navigational or engine watch) [1].

Master programmes are implemented be academies and universities on the second stage of higher education. These programmes imply the graduates' ability to solve difficult professional tasks and issues in complex. Master programmes additionally imply acquiring knowledge of innovative types and skills of independent research.

To obtain management level senior students must be conversant with such crucially important concepts as **situational awareness, onboard safety culture, and implementation of COLREGs** in adequate communication with the pilot, the master and OOW.

Most accidents are caused by human error, not technological or mechanical failure, the immediate cause is very often that a person made a disastrous decision. As for the management level **the accident investigation** is the most prominent part of the curriculum for Masters in Navigation for acquiring professional English skills in National University "Odessa Maritime Academy".

For the teaching strategy the 4-step approach for solving a problem can be effective and useful.

1. Defining the problem;
2. Generating alternatives;
3. Evaluating and selecting alternatives;
4. Implementing solutions.

The use of all 4 stages can vary and depend on the exact task in the definite field. Masters in navigation should look deeper to figure out the cause of the problem, fix the underlying systems and processes so that it goes away for good.

Root Cause Analysis (RCA) is a popular and often-used technique that helps people answer the questions of **WHY** the problem occurred in the first place. It identifies the origin of a problem using a specific set of steps to find its primary cause. The main things to determine are: what happened; why it happened; what actions to reduce the likelihood that it will happen again.

This technique is widely used in accident investigation by shipping companies to prevent recurrence. RCA has proven to be a powerful loss-prevention tool and allows crewmembers to discover the true root cause of a casualty. The purpose is to raise situational awareness of officers about the reason why accidents occur. If the root cause can be established and rectified, the risk of accident reoccurring is substantially reduced [2].

The problem-solving approach focuses on the analytical ability of Masters to find correct professionally-grounded solution based on theoretical knowledge and practical experience on board the vessel.

REFERENCES

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[2] Andersen, B. and Fagerhaug, T. Root cause analysis: simplified tools and techniques. ASQ Quality Press, Milwaukee, WI, 2006. pp. 1-19.