

Risk Preparedness and Management Scheme for Military Units

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Abstract: - This work comes to propose the application of Job Rotation model in risk preparedness and management for military units. It describes the design of an innovative training and employment scheme based on the Job Rotation model customized around risk preparedness and management for the army. The proposed model initially addresses the systematic training of selected military officers in risk prevention and crisis management. This initial group of military officers will depart for military units substituting units' officers that will be selected to follow the same risk management training. The initial group of military officers while being allocated to units will implement an initial risk, and associated contingency plan with the support of risk management experts (their trainers and mentors). When the rotation will end, the military officers of the units that participated to the rotations will return to their positions with duty to update, disseminate, and realize the plans in case of hazardous situations.

Key-Words: - Risk Preparedness, Job Rotation, Training Sessions, Military Units, Military Applications.

1 Introduction

No matter how stringent the safety standards are in military units, unforeseen events will occur and military officers must be prepared to deal with their consequences. These unforeseen events, that from now on are going to be referred to by the term "risks", may include both external threats (enemy activities, weapons threats, asymmetrical threats, etc) and possible accidents (hazards arising from personnel activities or unpredictable factors like weather, earthquakes or other natural disasters). Since a large proportion of the military personnel are inexperienced young people like junior commissioned or non-commissioned officers and conscription soldiers, hazards are highly likely to become realized causing dramatic results firstly for the families of the sufferers and most importantly for the moral and credibility of the entire armed forces. Commanding officers are responsible for the safety of their soldiers and are in several cases charged for injuries or deaths occurring to personnel under their commands. As a response to the above situation, military personnel needs to undergo continuous training in order to be prepared to handle new risks while military units are required to be staffed with personnel capable of effectively

responding to all possible risks, as soon as they become apparent.

Accidents due to hazards are not a military only phenomenon. According to the European Agency for Safety and Health at Work (OSHA) every three and a half minutes, somebody in the European Union dies from work-related causes while every year, 142.400 people in the EU die from occupational diseases and 8.900 from work-related accidents.

This work proposes a computer assisted procedure for effective organizing of the continuing training of the military officers in risk preparedness and management in order to be able to predict and efficiently manage such hazards. The model to achieve this, in an extensive network of military units, is a replication and training scheme called Job Rotation that is widely used for the training of employees and their substitution with unemployed in the labor market. Job Rotation in its original approach is a model that enables a limited solution to be found to the big question of the relationship between training and employment. Job rotation is training and education in which the unemployed are educated and trained continuously in order to replace employees in companies, during the time that they leave their jobs for more education and

training [1]. Additionally, it has been proposed in literature that Job Rotation be used for increasing the efficiency and the productivity of the organization, for early discovering and correction of faults in the procedures followed, for on-the-job training and for increasing personnel job satisfaction [2]. While the extent to which civil organizations follow procedures depends on the maturity of the organization and the skills of their managers, the operation of military units is critically based upon following pre-designed procedures and hence Job Rotation is even more important. Finally in the paradigm of the Hellenic Army, upon which this study is based, requires that staff is regularly transferred between units and systematically follows further education courses. Merging this policy with Job Rotation principles can therefore largely increase the overall effectiveness without introducing difficult to accept changes in the overall structure.

In our proposed approach, the Job Rotation, in the field of risk preparedness and management, is an energetic measure for the life long training of the present military officers, under the goal of improvement in hazards prevention and crisis management. The officers trained, will gain the necessary experience and will form a tank of military experts in the field of risk prevention and management tailor made for military units, that will be participating to the implementation of further Job Rotation schemes or can be directly allocated in units seeking for their kind of expertise.

The long term objective of the model is to promote and enhance in the culture of the military officers and army leaders in the necessity of risk preparedness and management and their sense of social responsibility. This is achieved via the support of a distributed software system that assists the effective utilization of the available personnel and the effective management of the army's skills and knowledge resources in the area of risk management.

2 Job Rotation as a labor tool

The Job Rotation model in its labor approach offers opportunities for organizations, as well as for the people searching for a job. The Job Rotation means on the first hand, the refreshment of the present human resource, under the goal of improvement in quality, greater productivity and new forms of management at work, but on the second hand it fulfils the need for the replacement of the staff that left their posts for further training [3], [4], [5].

Job Rotation has been described as a win-win strategy where all concerned derive benefit [6]. The organization's productivity does not suffer from absenteeism among the personnel, its competitive edge is enhanced and recruitment is facilitated. The employees' level of expertise and motivation increase. Inexperienced officers acquire work experience and training and thereby more self-esteem. Job Rotation helps the junior personnel to rapidly acquire experience and hence rapidly be assigned to positions of responsibility for the benefit of both the service and their personal development.

The employment situation in society improves, flexibility on the labor markets is enhanced and the idea of lifelong learning becomes a reality. In order to be successful Job Rotation must be based on extensive and intense co-operation among all concerned. Within the scope of the armed forces, as well as in civil large scale organizations, Job Rotation promotes the process of rapid gathering and dissemination of knowledge and experience between distant staff. A simplified example of conceptual model of the introduction of Job Rotation is given in Figure 1 below.

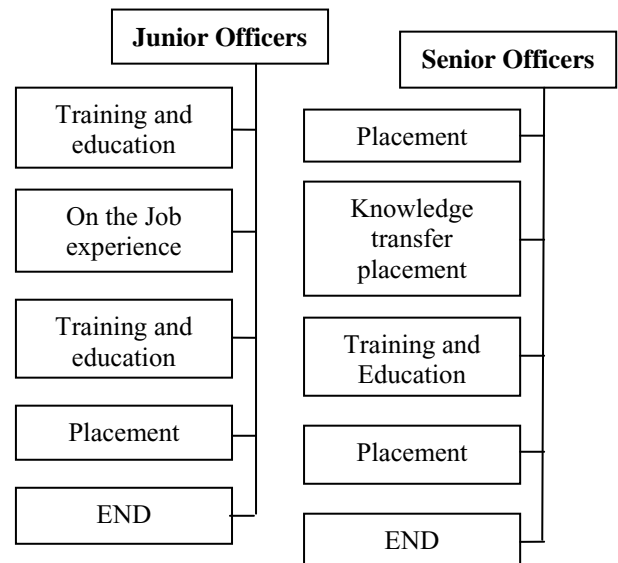


Figure 1: Simple Job Rotation model for army officers

Junior officers receive training and education. Following that they are assigned to units with experience in the required field(s). They then receive further training and education and are placed in units where they apply their specific skills and knowledge.

Senior officers are assumed to be experienced in one or more fields and already placed in units. They are then transferred to units where their particular skill is lacking, where they transfer their knowledge

and train more officers on the job. They go on to receive further training and education. They are hence placed to new units where they apply their newly acquired skills.

3 Risk Management in Military Units

Military units are places that have been created by state authorities as a means of providing responses to unforeseen events, usually external threats but also natural disasters, major accidents (e.g. a plane crash) etc. As all these hazards are dynamic and evolving with time, there is a continuous need for their staff to receive further education in new skills, as required by the evolving risk assessment. A problem that hence arises is that of managing to allow officers to go and attend the required further education courses, without removing from the unit any particular skill without which it cannot function effectively. From a different perspective, the purpose of knowledge dissemination can be served if trained officers are placed in units where their particular skills are required but there exist no trained personnel to provide them. What is therefore required is a means for the army to manage the distribution and movement of existing knowledge and skills in risk management, at the same time as providing to the service both new knowledge and new personnel that is inevitably untrained. The application of the proposed model in risk prevention and management with the participation of military officers will offer a new approach to hazard prevention and provision of security and safety to society as well as a new culture to the military forces about accidents prevention and crisis management.

The main objective of the proposed model is to implement a sustainable Job Rotation scheme in risk management and prevention in the armed forces. The results, apart from mobilizing and sensitizing a great number of military officers, civil staff and soldiers, address the exchange of experience and training in identified hazards between the trained officers. This will be achieved by reporting and analyzing past accidents happened to military units so that lessons to be learnt in order for trained officers to be able to prevent similar accidents from happening in the future in their units.

4 Methodology

In order to implement the proposed model the following tasks need to take place:

1. **Needs analysis:** This task addresses information' gathering and analysis that

include base line information on disaster preparedness (i.e. monitoring results, risk assessments/objectives in relation to disaster preparedness, existing work and risk effects, health statistics, etc.). Questionnaires are necessary to survey military units to collect information on disaster preparedness. This includes obtaining data to identify potential impacts (i.e. via specifically-designed questionnaires - quantitative / qualitative methods, consultations, participatory approach) of disasters, containing aspects of socio-economic, cultural and environmental conditions, living conditions, social influences, individual lifestyle factors. Risk assessment work will identify the status quo, and help focus on the recommendations for training in each case.

2. **Identification and customization of the training courses:** This task should be based on previous experience gained from incentives and programs in risk management in all military units. Criteria for the selection of the training courses should be formed and they should confront to the results of the needs analysis.

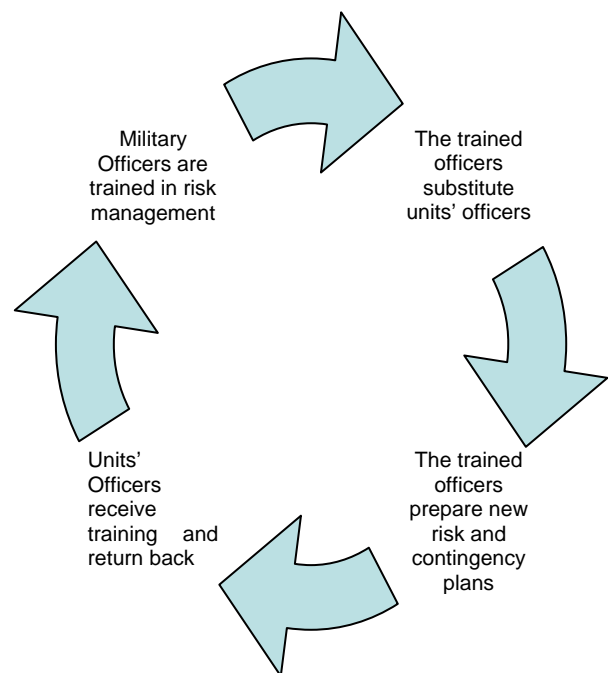


Figure 2: The Job Rotation scheme

3. **Actualization of the Job Rotation scheme:** During this task, the design of the Job Rotation model customized around risk preparedness and management for the military units will be implemented. The Job

Rotation scheme (Figure 2) will address the training of military staff in risk management using the courses selected in task 2. The officers that will be trained will substitute units' officers that will be selected to participate to the same training sessions. The Originally trained officers, while being allocated in the units, during the rotations, will implement an initial risk, and associated contingency plan for each unit. When the rotation will end, the units' officers will return to their position with duty to update disseminate, and realize this plan in case of emergency.

The 9-phase strategy for setting up, manage and implement a Job Rotation schemes in the military force is proposed to be the following:

1. Preparation
 2. Application phase
 3. Information
 4. Detailed planning
 5. Officer's Selection phase
 6. Carrying out the Job Rotation schemes
 7. Implementation of risk identification and contingency plans
 8. Evaluation
 9. Perspectives for new schemes.
4. **Monitoring and Evaluation:** The overall procedure should be evaluated to obtain measurable results. Questionnaires for the trainers, trainees as well as to the participating officers and Military Units' commanders should be scheduled. The questionnaires should be completed before and after the Job Rotations. The data should be processed and categorized to derive major outcomes. A final report with the current achievements and problems faced will be useful for further implementations.
5. **Networking:** Continues cooperation and networking is recognized as a crucial factor for an effective response to emergencies. The successful implementation of the Job Rotations in risk preparedness and management assumes the life long exchange of best practices and cooperation between the risk management experts and trained officers. Networking can take place through online platforms with forums, blogs, instant messaging tools and other novel WEB 2 technologies.

5 System Architecture

The main barrier to this methodology is the wide distribution of the military units and the large number of officers that will be candidates to take part in the rotation scheme. To manage to coordinate efficiently these rotations and to minimize expenditures the implementation of an on-line management system is more than necessary. The main characteristics of such a service are relativeness and security since it will deal with sensitive military data. A possible solution could be with the use of an integrated Grid/Web Services Job Rotation management tool [7], [8], [9]. The innovation of the system is the implementation of the Job Rotation model and its integration with the Grid and Web Services technologies offering advanced security. The service will deal with the management of the Job Rotation activities. On one hand substitutes Units' Officers with already trained officers centrally selected and on the other hand coordinates monitors and reports on the achieved rotations.

The service will be setup as a distributed application, whose processing requirements will be satisfied by multiple servers located in the different military units through web services. The integration of these web services to the Job Rotation system will be accomplished through Grid/Web services architecture. The web services, constituting the Grid, will be custom-made for Job rotation in risk preparedness and management purposes, performing a specific set of operations that will be offering up-to-date information on training sessions and officers willing and capable to participate.

The service is a TCP/IP network engine of Job Rotation and a data storage system. The data storage system deals with issues such as user rights and RDBMS. The web front end has a user friendly GUI that enables users to access information and knowledge and coordinate Job Rotation offers. End users communicate with the system through the HTTP protocol and with SSL sessions when secure connections are required.

6 Expected Results

The main objective of this work is to set the foundations to build a continuous and dynamic process of Job Rotation for enhancing risk preparedness in the military, providing to the military officers all the appropriate information and knowledge to protect themselves and Soldiers lives and the state's property in real and major emergencies.

Further objectives include the prevention of military accidents that can have unwanted effects,

and the improvement of the safety conditions and society's confidence. Since it is better to be safe than sorry, the proposed model will prepare the military officers to identify the hazardous operations that take place within the different military units and the possible risks due to natural and technological hazards maintaining a high level of preparedness to respond.

Finally, information technology will facilitate the application of the Job Rotation schemes and will ease access to information on risk prevention and management from the participating officers offering them at the same time the tools to continue exchange ideas and discuss case studies that can be occur and prevented in the different units.

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